INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	February 25, 2015
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Tradebe Treatment and Recycling LLC
Permit Level:	Title V Significant Source Modification
Permit Number:	089-34432-00345
Source Location:	4343 Kennedy Avenue East Chicago, Indiana
Type of Action Taken:	Modification at an existing source

Notice of Decision: Approval - Effective Immediately

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

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34432.

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
Final-Permit 4/4/14

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Thomas W. Easterly
Commissioner

February 25, 2015

Ms. Tita LaGrimas
Tradebe Treatment and Recycling, LLC
4343 Kennedy Avenue
East Chicago, IN 46312

Re: 089-34432-00345
Significant Source Modification

Dear Tita:

Tradebe Treatment and Recycling, LLC was issued Part 70 Operating Permit Renewal No. T089-29424-00345 on February 25, 2011 for a stationary waste management, recycling and fuel processing source located at 4343 Kennedy Avenue. An application to modify the source was received on April 15, 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:

(a) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

Pursuant to 326 IAC 2-7-10.5, the following emission unit is approved for modification at the source, with deleted language as ~~strikethroughs~~ and new language **in bold**:

(i) One (1) Pot Still, constructed in 2007 **and modified in 2015**, with a maximum throughput rate of ~~70~~**115** gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

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).

The source must comply with the requirements of 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 before operation of any of the proposed emission units can begin.

Please find attached the Significant Source Modification, including the following attachments:

Attachment B: NESHAP for Equipment Leaks (Fugitive Emission Sources) [40 CFR Part 61, Subpart V]
Attachment D: NESHAP for Organic Liquids Distribution (Non-Gasoline) [40 CFR 63, Subpart EEEE]
Attachment E: NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR 63, Subpart DDDDD]

Attachment F: NSPS 40 CFR 60.18
Attachment G: NESHAP for Off-Site Waste and Recovery Operations [40 CFR 63, Subpart DD]
Attachment H: NSPS for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII]
Attachment I: NESHAP for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

The source modfication also references the below listed attachments. Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this source modification:

Attachment A: NESHAP for Benzene Waste Operations [40 CFR Part 61, Subpart FF]
Attachment C: NESHAP for Equipment Leaks (Fugitive Emission Sources) of Benzene [40 CFR Part 61, Subpart J]

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

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 Heath Hartley 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 Heath Hartley or extension 2-8217 or dial (317) 232-8217.

Sincerely,

Nathan C. Bell, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

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

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Governor

Thomas W. Easterly
Commissioner

Significant Source Modification to a Part 70 Source

OFFICE OF AIR QUALITY

Tradebe Treatment and Recycling LLC
4343 Kennedy Avenue
East Chicago, Indiana 46312

(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. 089-34432-00345	
Issued by: Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 25, 2015

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SECTION ASOURCE 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 waste management, recycling and fuel processing source.

Source Address:	4343 Kennedy Avenue, East Chicago, Indiana 46312
General Source Phone Number:	(219) 397-3951
SIC Code:	4953 (Refuse Systems)
County Location:	Lake
Source Location Status:	Nonattainment for ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Major Source, under Emission Offset Rules Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare (FL2) as primary VOC control and carbon canisters as backup VOC control (C9).

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(c) One (1) materials manual lab packing, depacking, and bulking operation, identified as Unit 4, with a maximum capacity of 27,375 pack containers per year, constructed in 1992, including three insignificant booths located in Area 5 in addition to the following equipment:

(1) One (1) booth for manual lab packing, depacking and bulking of organic materials, identified as Lab Pack Booth 1, using a single carbon canister for VOC control (C13), and exhausting to stack LP S1.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system for VOC control (C14), exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control (C15), exhausting to SDS 03.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control (C16), exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control (C17), exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare (FL1) with a demister (and a carbon adsorption system as backup (C18)) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control (BH1-BH2), exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system (C20), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system (C21), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters (C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(l) One (1) degassing operation, constructed in 2008 and approved in 2014 for modification, with a maximum degassing rate of 405.8 tons of gasses per year. The degassing operation includes a reactor tank into which gasses are vented and a pressurized "shock" tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare (FL3) or carbon canisters (C36).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

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

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

(c) Activities with emissions equal to or less than the following thresholds: 5 lb/hr or 25 lb/day PM; 5 lb/hr or 25 lb/day SO2; 5 lb/hr or 25 lb/day NOx; 3 lb/hr or 15 lb/day VOC; 0.6 tons per year Pb; 1.0 ton/yr of a single HAP, or 2.5 ton/yr of any combination of HAPs:

(1) One (1) booth for manual unpacking of dry chemical materials, identified as LP B4 of Unit 4, with a maximum capacity of 200 pounds per day, using a baghouse for particulate control, and exhausting to stack LP S4. [326 IAC 6-3-2]

(2) Two (2) packing booths, Lab Pack Booth 2 and Lab Pack Booth 3, used to handle acids and caustics, using a wet scrubber for control. [326 IAC 6-3-2]

(d) One (1) hot oil heater, capacity of 2.5 MMBtu/hr.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T 089-29424-00345, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T 089-29424-00345 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

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

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

(1) That this permit contains a material mistake.

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

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

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

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

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

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

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

C.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 Reserved

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)]

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

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

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

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

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

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

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

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

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

C.12 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.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.14 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.15 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]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), the Permittee shall submit by July 1 an emission statement covering the previous calendar year as follows:

(1) starting in 2004 and every three (3) years thereafter, and

(2) any year not already required under (1) if the source emits volatile organic compounds or oxides of nitrogen into the ambient air at levels equal to or greater than twenty-five (25) tons during the previous calendar year.

(b) 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.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring

sample, measurement, report, or application. Support information includes the following, where applicable:

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

Records of required monitoring information include the following, where applicable:

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

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

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

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

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

(b) The address for report submittal is:

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

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

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

Stratospheric Ozone Protection

C.18 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) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare as primary VOC control (FL2) and carbon canisters as backup VOC control.

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(c) One (1) materials manual lab packing, depacking, and bulking operation, identified as Unit 4, with a maximum capacity of 27,375 pack containers per year, constructed in 1992, including three insignificant booths located in Area 5 in addition to the following equipment:

(1) One (1) booth for manual lab packing, depacking and bulking of organic materials, identified as Lab Pack Booth 1, using a single carbon canister for VOC control (C13), and exhausting to stack LP S1.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is

considered an affected facility.

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system for VOC control (C14), exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control (C15), exhausting to SDS 03.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control (C16), exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control (C17), exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare (FL1) with a demister (and a carbon adsorption system as backup (C18)) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control (BH1-BH2), exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system (C20), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system (C21), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters

(C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(l) One (1) degassing operation, constructed in 2008 and approved in 2014 for modification, with a maximum degassing rate of 405.8 tons of gasses per year. The degassing operation includes a reactor tank into which gasses are vented and a pressurized “shock” tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare (FL3) or carbon canisters (C36).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack

SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(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 Emission Offset [326 IAC 2-3]

(a) Pursuant to MSM 089-15970-00345, issued December 2, 2003, and MPM 089-18513-00345, issued February 4, 2004, and as revised by this Part 70 permit, the VOC emissions from the SDS shredder, Solids Distillation System and Distillation Unit shall not exceed the emission limits listed in the table below:

Unit ID	Stack(s) ID	VOC Emission Limit (lb/hr)
SDS Shredder	SDS 01(a) and (b).	0.028, total
Solids Distillation System*	SDS 02, SDS 03, SDS 04, SDS 08, and SDS 09	0.169, total
Distillation Unit	SDS 05	0.014

* Not including the SDS Shredder

(b) In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for the 2003 modification, the Permittee shall comply with the following:

VOC emissions after control from the SDS VRU shall be less than 23.4 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits shall limit VOC emissions to less than 25 tons per twelve (12) consecutive month period from the emission units added in as part of MSM 089-15970-00345, issued December 2, 2003. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable to these units from the 2003 modification.

(c) In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for the 2015 modification, the Permittee shall comply with the following:

VOC emissions after control all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, along with emissions from the pot still and emergency generator, shall limit the potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for this 2015 modification.

D.1.2 PSD Minor Limit [326 IAC 2-2]

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

(a) PM emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(b) PM_{10} emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(c) $PM_{2.5}$ emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(d) CO emissions (after control) from the SDS VRU shall not exceed 7.4 pounds per hour of SDS vapor product processed.

(e) CO emissions (after control) from the SDS II VRU II shall not exceed 7.4 pounds per hour of SDS II vapor product processed.

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

D.1.3 Best Available Control Technology (BACT) - VOC [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT) and SSM 089-34432-00345, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The vapor recovery units, SDS VRU and SDS II VRU II, shall be controlled by open flare FL1 with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that SDS VRU and/or SDS II VRU II are in operation, except during maintenance or malfunction of the flare FL1. During maintenance or malfunction of the flare FL1, the SDS VRU shall be controlled by the carbon adsorption system (C18) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS VRU is in operation and the SDS II VRU II shall be controlled by the carbon adsorption system (C38) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS II VRU II is in operation.

(b) VOC emissions after control from the SDS VRU shall be less than 23.4 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Each of the emission units listed in the table below shall be controlled by the associated carbon adsorption system with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that each of these emission units are in operation.

Emission Unit(s)	Carbon Adsorption System
SDS Shredder	C14
Anaerobic Thermal Desorption System enclosed feed conveyor	C15
Oil-Water Separator	C16
Water Tank	C17
Distillation Unit	C19
Tank 55	C20
Tanks 52 through 54	C21
Pot Still	C33
SDS Shredder II	C37
F-01 and F-02	C39
Tanks 81 through 84	C40
Tank 85	C41
Tank 86	C42
Tank 87	C43

D.1.4 VOC Limitation [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 (BACT) not applicable to Unit 2R and Unit 2S, Permittee shall comply with the following:

(a) The throughput to Unit 2R and Unit 2S shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.

(b) Loading loss VOC emissions from Unit 2R and Unit 2S shall each not exceed 1.03 pounds of VOC per 1,000 gallons of liquid material throughput.

Compliance with these limits shall limit the VOC emissions from Unit 2R and Unit 2S to less than 25 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 8-1-6 not applicable to Unit 2R and Unit 2S.

D.1.5 Particulate Emission Limitations for Lake County [326 IAC 6.8-1]

Pursuant to 326 IAC 6.8-1-2, particulate matter from the shaker and conveyor system section of the Solids Distillation System (exhausting to stacks SDS 04 and SDS 09) solids handling system (SHS), the natural gas fired heater associated with the ATDU, the natural gas fired heater associated with ATDU II and cooling tower SDS II 13 shall each not exceed 0.03 grain per dry standard cubic foot.

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the following applies to HWF mix blend and storage tanks 1R, 4, 18, 19, 20, 21, 22, and 23, HWF blending and storage tanks 6 and 7, tank 24HP, tank 25HD, HWF receiving and storage tank 29, RCRA hazardous waste tanks 52, 53, 54 and 68, condensed liquid tank 55 and product tanks 57 through 67, Tanks 81 through 87, F-01 and F-02:

(a) The Permittee shall maintain records of the following for the life of each vessel:

(1) The vessel identification number;

(2) The vessel dimensions;

(3) The vessel capacity; and

(4) A description of the emission control equipment for each vessel described in 326 IAC 8-9-4(a) and 4(b), if applicable, or a schedule for installation of emission control equipment on vessels described in 326 IAC 8-9-4(a) and 4(b), if

applicable, with a certification that the emission control equipment meets the applicable standards.

(b) A report containing the information described in (a) shall be submitted to IDEM, OAQ within 30 days of permit issuance.

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

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

Compliance Determination Requirements

D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1(b), D.1.1(c), and D.1.3(a), the Permittee shall perform testing of flare FL1 controlling the SDS VRU and SDS II VRU II pursuant to the requirements of 40 CFR 60.18, utilizing methods as approved by the Commissioner, not later than one hundred and eighty (180) days after issuance of this permit, 089-34503-00345. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this section.

D.1.9 VOC Emissions

Compliance with the VOC limit contained in Conditions D.1.1(c) and D.1.3(c) shall be determined using the following equations:

$$V_{TOT} = \sum_{m=1}^{12} \left[V_S + V_{SHS} + V_{VRUII} + V_{T81-84} + V_{T85} + V_{T86} + V_{T87} + V_{F-01} + V_{F-02} \right]$$

$$V_S = \left(W * EF_S * \left(\frac{100\% - CE_S}{100\%} \right) \right)$$

$$V_{SHS} = \left(W * EF_{SHS} \right)$$

$$V_{VRUII} = \left(W * EF_{VRUII} * \left(\frac{100\% - CE_{F-CC}}{100\%} \right) \right)$$

$$V_{T81-84} = \left(U_{T81-84} * \left(\frac{100\% - CE_{T81-84}}{100\%} \right) \right)$$

$$V_{T85} = \left(U_{T85} * \left(\frac{100\% - CE_{T85}}{100\%} \right) \right)$$

$$V_{T86} = \left(U_{T86} * \left(\frac{100\% - CE_{T86}}{100\%} \right) \right)$$

$$V_{T87} = \left(U_{T87} * \left(\frac{100\% - CE_{T87}}{100\%} \right) \right)$$

$$V_{F-01} = \left(U_{F-01} * \left(\frac{100\% - CE_{F-01}}{100\%} \right) \right)$$

$$V_{F-02} = \left(U_{F-02} * \left(\frac{100\% - CE_{F-02}}{100\%} \right) \right)$$

Where:

V_{TOT}	=	Total emissions of VOC emissions after control from the SDS II (tons/year);
m	=	Each calendar month during the compliance period;
V_S	=	Total VOC emissions (after control) from the SDS II shredder per month (tons);
V_{SHS}	=	Total VOC emissions (after control) from the SDS II solids handling system per month (tons);
V_{VRUII}	=	Total VOC emissions (after control) from the SDS II VRU II per month (tons);
V_{T81-84}	=	Total VOC emissions (after control) from the Tanks 81 through 84 per month (tons);
V_{T85}	=	Total VOC emissions (after control) from the Tank 85 per month (tons);
V_{T86}	=	Total VOC emissions (after control) from the Tank 86 per month (tons);
V_{T87}	=	Total VOC emissions (after control) from the Tank 87 per month (tons);
V_{F-01}	=	Total VOC emissions (after control) from the F-01 per month (tons);
V_{F-02}	=	Total VOC emissions (after control) from the F-02 per month (tons);
W	=	Total weight of input material fed to the SDS II shredder per month (tons);
EF_S	=	VOC uncontrolled emission factor for the SDS II shredder (lb/ton);
EF_{SHS}	=	VOC uncontrolled emission factor for the SDS II solids handling system (lb/ton feed to the SDS II shredder);
EF_{VRUII}	=	VOC uncontrolled emission factor for the SDS II VRU II (lb/ton);
U_{T81-84}	=	VOC uncontrolled emissions for Tanks 81 through 84 (ton/yr);
U_{T85}	=	VOC uncontrolled emissions for Tank 85 (ton/yr);
U_{T86}	=	VOC uncontrolled emissions for Tank 86 (ton/yr);
U_{T87}	=	VOC uncontrolled emissions for Tank 87 (ton/yr);
U_{F-01}	=	VOC uncontrolled emissions for F-01 (ton/yr);
U_{F-02}	=	VOC uncontrolled emissions for F-02 (ton/yr);
CE_S	=	VOC control efficiency of the shredder carbon adsorption system (%);
CE_{F-CC}	=	VOC control efficiency of the flare FL1 or carbon adsorption system (%);
CE_{T81-84}	=	VOC control efficiency of the Tanks 81 through 84 carbon adsorption system (%);
CE_{T85}	=	VOC control efficiency of the Tank 85 carbon adsorption system (%);
CE_{T86}	=	VOC control efficiency of the Tank 86 carbon adsorption system (%);
CE_{T87}	=	VOC control efficiency of the Tank 87 carbon adsorption system (%);
CE_{F-01}	=	VOC control efficiency of the F-01 carbon adsorption system (%);
CE_{F-02}	=	VOC control efficiency of the F-02 carbon adsorption system (%);

Each of the VOC control efficiency values shall equal 98%.

D.1.10 VOC Emissions

Compliance with the VOC limit contained in Condition D.1.1(b) and D.1.3(b) shall be determined as follows:

$$V_{TOT} = \sum_{m=1}^{12} \left[W * EF_{VRU} * \left(\frac{100\% - CE_{F-CC}}{100\%} \right) \right]$$

Where:

V_{TOT}	=	Total emissions of VOC emissions after control from the SDS VRU (tons/year);
m	=	Each calendar month during the compliance period;
W	=	Total weight of input material fed to SDS shredder per month (tons);
EF_{VRU}	=	VOC uncontrolled emission factor for the SDS VRU (lb/ton);
$CE_{F\text{-}CC}$	=	VOC control efficiency of the flare FL1 or carbon adsorption system (%); (this value shall equal 98%).

D.1.11 Emissions Controls [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) In order to ensure compliance with Condition D.1.5:

(1) The baghouse shall be in operation and control particulate emissions at all times that the shaker and conveyor system section of the Anaerobic Thermal Desorption System is in operation.

(2) 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.

(b) In order to ensure compliance with Conditions D.1.2(a), D.1.2(b), and D.1.2(c):

(1) Baghouse BH3 shall be in operation and control particulate emissions at all times that the solids handling system, SHS is in operation.

(2) 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.

(c) In order to ensure compliance with Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, and D.1.10:

(1) The flare FL1 shall be in operation and control VOC emissions at all times that the VRU and/or VRU II is in operation except during maintenance or malfunction of the flare FL1. During maintenance or malfunction of the flare FL1, the carbon adsorption system (C18) shall be in operation and control VOC emissions at all times that the VRU is in operation and the carbon adsorption system (C38) shall be in operation and control VOC emissions at all times that the VRU II is in operation.

For the purpose of this section, "operation of the flare" shall mean the presence of a pilot flame or equivalent. The flare shall be operated per manufacturer's specifications.

(2) The Permittee shall comply with the requirements of 40 CFR 60.18(b) (included as Attachment G) for the flare associated with the Vapor Recovery Unit (VRU).

(d) In order to ensure compliance with Conditions D.1.1(c), D.1.3(c), D.1.3(d) and D.1.9, each of the carbon adsorption systems associated with the emission unit(s) listed in the

table below shall be in operation and control VOC emissions from the respective emission unit(s) at all times that the emission unit(s) are in operation:

Emission Unit(s)	Carbon Adsorption System
SDS Shredder	C14
Anaerobic Thermal Desorption System enclosed feed conveyor	C15
Oil-Water Separator	C16
Water Tank	C17
Distillation Unit	C19
Tank 55	C20
Tanks 52 through 54	C21
Pot Still	C33
SDS Shredder II	C37
F-01 and F-02	C39
Tanks 81 through 84	C40
Tank 85	C41
Tank 86	C42
Tank 87	C43

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

D.1.12 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) Once per day visible emission notations of the stack exhaust from the shaker and conveyor system section of the Solids Distillation System (exhausting to stacks SDS 04 and SDS 09) shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

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

(a) The Permittee shall monitor the pressure drop across the baghouses used in conjunction with the shaker and conveyor system section of the Solids Distillation System, at least once per day when the shaker and/or conveyor system is in operation. 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 between 2.0 and 14.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor the pressure drop across baghouse BH3 at least once per day when the solids handling system, SHS, is in operation. When, for any one reading, the pressure drop across baghouse BH3 is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligations 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 instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.

D.1.14 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) For a single compartment baghouse controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed unit 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).

(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 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 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 baghouses 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.1.15 Flare Pilot Flame [40 CFR 64]

In order to assure compliance with Conditions D.1.1(b). D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, and D.1.10, the Permittee shall continuously monitor the presence of the flare FL1 pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame. For the purpose of this condition, continuous means no less than once per minute.

D.1.16 Carbon Adsorber/Canister Monitoring

(a) The Permittee shall conduct inspections, at least once per day, of each carbon adsorber/canister control system associated with the SDS and SDS II systems identified in Condition D.1.11(d) when the respective emission unit(s) is in operation. Inspections shall be made at both the inlet and outlet of the control system. The inspections shall be for the detection of VOC with a portable analyzer. If the inspections indicate that the outlet concentration of VOC is greater than or equal to two percent (2%) of the inlet concentration of VOC, then the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

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

D.1.17 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.6 - Volatile Organic Compounds, the Permittee shall maintain the records specified in that condition.

(b) To document the compliance status with Condition D.1.12, the Permittee shall maintain once per day records of the visible emission notations. The Permittee shall include in its daily record when any of these records are not taken and the reason (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.1.13, the Permittee shall maintain once per day records of the baghouse pressure drop readings. The Permittee shall include in its daily record when any of these records are not taken and the reason (e.g., the process did not operate that day).

(d) To document the compliance status with Condition D.1.4(a), the Permittee shall maintain records of the liquid material throughput of Unit 2R and Unit 2S each month and each compliance period.

(e) To document the compliance status with Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, D.1.10 and D.1.15, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limits and requirements established in Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, D.1.10 and D.1.15.

(1) A copy of the manufacturer's operation and maintenance manual that defines operating procedures that will ensure destruction efficiency;

(2) The design specifications for the flare, and make such records available upon request to IDEM, OAQ and the U.S. EPA;

(3) Date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the flare;

(4) The Permittee shall maintain monthly records in either electronic or hard copy to demonstrate the thermocouple or equivalent device detects the presence of a flame no less than once per minute on the flare when either of the Vapor Recovery Units (VRU or VRU II) were in operation;

(5) Measurements, engineering assessments, and calculations used to determine the monthly VOC emissions (before and after control) associated with each of the SDS and SDS II processes

(6) The VOC emissions (after control) for each month and each compliance period for the SDS and the SDS II; and

(7) Records of flare FL1 testing demonstrating compliance with the requirements of 40 CFR 60.18.

(f) To document the compliance status with Condition D.1.16, the Permittee shall maintain records of the inspections required under Condition D.1.16. The Permittee shall also maintain the following records:

(1) The normal carbon bed changeout frequency and any supporting information, including, but not limited to, performance test data, monitoring data, the carbon bed adsorption capacity, and pollutant loading;

(2) Carbon adsorber monitoring data, pollutant breakthrough data; and

(3) Date(s) of carbon bed changeout/replacement.

(4) Date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the Carbon adsorber C18 and C38.

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

D.1.18 Reporting Requirements

Quarterly summaries of the information to document the compliance status with Conditions D.1.3(a), D.1.4(a), D.1.9 and D.1.10 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, 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 reports submitted by the Permittee 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).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Activities

(a) 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 8-3-8]

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

(c) Activities with emissions equal to or less than the following thresholds: 5 lb/hr or 25 lb/day PM; 5 lb/hr or 25 lb/day SO2; 5 lb/hr or 25 lb/day NOx; 3 lb/hr or 15 lb/day VOC; 0.6 tons per year Pb; 1.0 ton/yr of a single HAP, or 2.5 ton/yr of any combination of HAPs:

(1) One (1) booth for manual unpacking of dry chemical materials, identified as LP B4 of Unit 4, with a maximum capacity of 200 pounds per day, using a baghouse for particulate control, and exhausting to stack LP S4. [326 IAC 6-3-2]

(2) Two (2) packing booths, Lab Pack Booth 2 and Lab Pack Booth 3, used to handle acids and caustics, using a wet scrubber for control. [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.2.1 Particulate Emission Limitations for Lake County [326 IAC 6.8-1]

Pursuant to 326 IAC 6.8-1-2, particulate matter from LP B4 of Unit 4, Lab Pack Booth 2 and Booth 3 shall not exceed 0.03 grain per dry standard cubic foot, each.

D.2.2 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:

(a) The Permittee of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

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

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

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

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

(6) Store waste solvent only in closed containers.

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

(b) The Permittee of a cold cleaner degreaser subject to this subsection shall 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.2.3 Material Requirements for Cold Cleaning Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8, the Permittee must comply with the following requirements with respect to the insignificant degreasing operations:

(a) Pursuant to IAC 8-3-8(b)(2), the Permittee shall not operate a cold cleaning degreaser with a solvent 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).

(b) Pursuant to 326 IAC 8-3-8(c)(2), the Permittee shall maintain each of the following records for each purchase of solvents for use in the insignificant Heritage cold cleaning degreaser. These records shall be retained on-site 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.

(4) The volume of each unit of solvent.

(5) The total volume of the solvent.

(6) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare (FL2) as primary VOC control and carbon canisters as backup VOC control (C9).

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(c) One (1) materials manual lab packing, depacking, and bulking operation, identified as Unit 4, with a maximum capacity of 27,375 pack containers per year, constructed in 1992, including three insignificant booths located in Area 5 in addition to the following equipment:

(1) One (1) booth for manual lab packing, depacking and bulking of organic materials, identified as Lab Pack Booth 1, using a single carbon canister for VOC control (C13), and exhausting to stack LP S1.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system for VOC control (C14), exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control (C15), exhausting to SDS 03.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control (C16), exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control (C17), exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare (FL1) with a demister (and a carbon adsorption system as backup (C18)) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control (BH1-BH2), exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system (C20), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system (C21), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters (C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(l) One (1) degassing operation, constructed in 2008 and approved in 2014 for modification, with a maximum degassing rate of 405.8 tons of gasses per year. The degassing operation includes a reactor tank into which gasses are vented and a pressurized "shock" tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare (FL3) or carbon canisters (C36).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(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)]

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 14-1] [40 CFR 61, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 14-1, apply to the source except when otherwise specified in 40 CFR 61, Subpart J.

E.1.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) - Equipment Leaks from Fugitive Emission Sources of Benzene [326 IAC 14-7][40 CFR Part 61, Subpart J]

Pursuant to 40 CFR 61 Subpart J, the Permittee shall comply with the following provisions of 40 CFR 61 Subpart J (included as Attachment C of this permit), which are incorporated as 326 IAC 14-7 for the facilities described in this section:

(1) 40 CFR 61.110
(2) 40 CFR 61.246(i)

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare (FL2) as primary VOC control and carbon canisters as backup VOC control (C9).

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(c) One (1) materials manual lab packing, depacking, and bulking operation, identified as Unit 4, with a maximum capacity of 27,375 pack containers per year, constructed in 1992, including three insignificant booths located in Area 5 in addition to the following equipment:

(1) One (1) booth for manual lab packing, depacking and bulking of organic materials, identified as Lab Pack Booth 1, using a single carbon canister for VOC control (C13), and exhausting to stack LP S1.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system for VOC control (C14), exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control (C15), exhausting to SDS 03.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control (C16), exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control (C17), exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare (FL1) with a demister (and a carbon adsorption system as backup (C18)) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control (BH1-BH2), exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system (C20), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system (C21), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters (C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(l) One (1) degassing operation, constructed in 2008 and approved in 2014 for modification, with a maximum degassing rate of 405.8 tons of gasses per year. The degassing operation includes a reactor tank into which gasses are vented and a pressurized "shock" tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare (FL3) or carbon canisters (C36).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

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

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61, Subpart A] [326 IAC 14-1]

Pursuant to 40 CFR 61, the Permittee shall comply with the provisions of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 14-1, for the above listed emissions units, except when otherwise specified in 40 CFR 61, 61, Subpart FF.

E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Benzene Waste Operations [40 CFR 61, Subpart FF]

The Permittee shall comply with the following provisions of 40 CFR 61 Subpart FF (included as Attachment A to this permit), for the above listed emissions units:

(1) 40 CFR 61.340;
(2) 40 CFR 61.341;
(3) 40 CFR 61.342;
(4) 40 CFR 61.343;
(5) 40 CFR 61.345;
(6) 40 CFR 61.346;
(7) 40 CFR 61.349;
(8) 40 CFR 61.350;
(9) 40 CFR 61.351;
(10) 40 CFR 61.354(a), (d), (e) and (f);
(11) 40 CFR 61.355;
(12) 40 CFR 61.356; and
(13) 40 CFR 61.357.

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Entire Source

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

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

E.3.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61, Subpart A] [326 IAC 14-1]

Pursuant to 40 CFR 61, the Permittee shall comply with the provisions of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 14-1, for the above listed emissions units, except when otherwise specified in 40 CFR 61, Subpart V.

E.3.2 Equipment Leaks (Fugitive Emission Sources) NESHAP Requirements [40 CFR 61, Subpart V] [326 IAC 14-8]

The Permittee shall comply with the following provisions of 40 CFR 61 Subpart V (included as Attachment B to this permit), which are incorporated by reference as 326 IAC 14-8, for the above listed emissions units:

(1) 40 CFR 61.240
(2) 40 CFR 61.241
(3) 40 CFR 61.242-1
(4) 40 CFR 61.242-2
(5) 40 CFR 61.242-7
(6) 40 CFR 61.242-8
(7) 40 CFR 61.242-10
(8) 40 CFR 61.242-11
(9) 40 CFR 61.245
(10) 40 CFR 61.246
(11) 40 CFR 61.247

SECTION E.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters (C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

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

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

E.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart EEEE.

E.4.2 Organic Liquids Distribution (Non-Gasoline) NESHAP [40 CFR 63, Subpart EEEE] [326 IAC 20-83]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart EEEE (included as Attachment D to this permit), which are incorporated by reference as 326 IAC 20-83 for tanks 57 through 67 and Unit 2R and Unit 2S:

(1) 40 CFR 63.2330

(2) 40 CFR 63.2334(a)
(3) 40 CFR 63.2338
(4) 40 CFR 63.2342(a) & (d)
(5) 40 CFR 63.2343(b)
(6) 40 CFR 63.2346(a),(b),(c),(d)&(i)
(7) 40 CFR 63.2350
(8) 40 CFR 63.2354
(9) 40 CFR 63.2358
(10) 40 CFR 63.2362
(11) 40 CFR 63.2366
(12) 40 CFR 63.2370
(13) 40 CFR 63.2374
(14) 40 CFR 63.2378
(15) 40 CFR 63.2382
(16) 40 CFR 63.2386
(17) 40 CFR 63.2390
(18) 40 CFR 63.2394
(19) 40 CFR 63.2396
(20) 40 CFR 63.2398
(21) 40 CFR 63.2402
(22) 40 CFR 63.2406
(23) Table 1
(24) Table 2
(25) Table 4
(26) Table 5
(27) Table 6
(28) Table 7
(29) Table 8
(30) Table 10
(31) Table 11
(32) Table 12

SECTION E.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

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

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

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E.5.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the ATDU II, except when otherwise specified in 40 CFR 63, Subpart DDDDD.

E.5.2 Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [40 CFR 63, Subpart DDDDD] [326 IAC 20-95]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart DDDDD (included as Attachment E to this permit), which are incorporated by reference as 326 IAC 20-95.

ATDU:

(1) 40 CFR 63.7485
(2) 40 CFR 63.7490(a)(2) & (b)
(3) 40 CFR 63.7495(b)
(4) 40 CFR 63.7499(l)
(5) 40 CFR 63.7500
(6) 40 CFR 63.7505(a)
(7) 40 CFR 63.7510(e)
(8) 40 CFR 63.7515(d)
(9) 40 CFR 63.7530(d), (e) and (f)
(10) 40 CFR 63.7540(a)
(11) 40 CFR 63.7545(a),(b) and (e)
(12) 40 CFR 63.7550
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570

(17) 40 CFR 63.7575
(18) Table 3

ATDU II:

(1) 40 CFR 63.7485
(2) 40 CFR 63.7490(a)(2) & (b)
(3) 40 CFR 63.7495(a)
(4) 40 CFR 63.7499(l)
(5) 40 CFR 63.7500
(6) 40 CFR 63.7505(a)
(7) 40 CFR 63.7510(g)
(8) 40 CFR 63.7515(d)
(9) 40 CFR 63.7530(d), (e) and (f)
(10) 40 CFR 63.7540(a)
(11) 40 CFR 63.7545(c) and (e)
(12) 40 CFR 63.7550
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570
(17) 40 CFR 63.7575
(18) Table 3

SECTION E.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare (FL2) as primary VOC control and carbon canisters as backup VOC control (C9).

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

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

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

E.6.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart DD.

E.6.2 Off-Site Waste and Recovery Operations NESHAP [40 CFR 63, Subpart DD] [326 IAC 20-23]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart DD (included as Attachment H to this permit), which are incorporated by reference as 326 IAC 20-23 for the above listed emissions units:

(1) 40 CFR 63.680
(2) 40 CFR 63.681
(3) 40 CFR 63.683
(4) 40 CFR 63.684
(5) 40 CFR 63.685
(6) 40 CFR 63.686
(7) 40 CFR 63.687
(8) 40 CFR 63.688
(9) 40 CFR 63.689
(10) 40 CFR 63.690
(11) 40 CFR 63.691
(12) 40 CFR 63.693
(13) 40 CFR 63.694
(14) 40 CFR 63.695
(15) 40 CFR 63.696
(16) 40 CFR 63.697
(17) 40 CFR 63.698

SECTION E.7 FACILITY OPERATION CONDITIONS

Facility Description:

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

E.7.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart 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 above listed emission unit, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

E.7.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart IIII]

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

(1) 40 CFR 60.4200(a)(2)
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4209(a)
(6) 40 CFR 60.4211(a), (c) & (f)
(7) 40 CFR 60.4214(b)
(8) 40 CFR 60.4218
(9) 40 CFR 60.4219
(10) Table 8

SECTION E.8 FACILITY OPERATION CONDITIONS

Facility Description:

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(b)(1)(i)
(4) 40 CFR 63.6605(b)
(5) 40 CFR 63.6640(f)
(6) 40 CFR 63.6645(f)
(7) 40 CFR 63.6665
(8) 40 CFR 63.6670
(9) 40 CFR 63.6675

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

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345

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: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345

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

Quarterly Report

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345
Facility: Unit 2R
Parameter: Liquid Material Throughput
Limit: The throughput to Unit 2R shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone:_____

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

Quarterly Report

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345
Facility: Unit 2S
Parameter: Liquid Material Throughput
Limit: The throughput to Unit 2S shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone:_____

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

Quarterly Report

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345
Facility: Vapor Recovery Unit (VRU) associated with SDS
Parameter: VOC emissions (after control)
Limit: VOC emissions (after control) from the Vapor Recovery Unit (VRU) shall not exceed 23.4 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall be determined using the equation contained in Condition D.1.10.

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone:_____

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

Quarterly Report

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345
Facility: SDS II
Parameter: VOC emissions (after control)
Limit: VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall be determined using the equation contained in Condition D.1.9.

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone:_____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345

Months: _____ to _____ Year:

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attachment B

Part 70 Operating Permit No: T 089-29424-00345

[Downloaded from the eCFR on May 21, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Subpart V—National Emission Standard for Equipment Leaks (Fugitive Emission Sources)

Source: 49 FR 23513, June 6, 1984, unless otherwise noted.

§ 61.240 Applicability and designation of sources.

(a) The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart.

(b) The provisions of this subpart apply to the sources listed in paragraph (a) after the date of promulgation of a specific subpart in part 61.

(c) While the provisions of this subpart are effective, a source to which this subpart applies that is also subject to the provisions of 40 CFR part 60 only will be required to comply with the provisions of this subpart.

(d) *Alternative means of compliance* —(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65 to satisfy the requirements of §§ 61.242-1 through 61.247 for equipment that is subject to this subpart and that is part of the same process unit. When choosing to comply with 40 CFR part 65, the requirements of §§ 61.245(d) and 61.246(i) and (j) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(2) *Part 65, subpart C or F.* For owners or operators choosing to comply with 40 CFR part 65, each surge control vessel and bottoms receiver subject to this subpart that meets the conditions specified in table 1 or table 2 of this subpart shall meet the requirements for storage vessels in 40 CFR part 65, subpart C; all other equipment subject to this subpart shall meet the requirements in 40 CFR part 65, subpart F.

(3) *Part 61, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C or F, must also comply with §§ 61.01, 61.02, 61.05 through 61.08, 61.10(b) through (d), 61.11, and 61.15 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (d)(3) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart C or F, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C or F, must comply with 40 CFR part 65, subpart A.

(4) *Rules referencing this subpart.* Owners or operators referenced to this subpart from subpart F or J of this part may choose to comply with 40 CFR part 65 for all equipment listed in paragraph (a) of this section.

[49 FR 23513, June 6, 1984, as amended at 65 FR 78280, Dec. 14, 2000]

§ 61.241 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, in subpart A of part 61, or in specific subparts of part 61; and the following terms shall have specific meaning given them:

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

Closed-vent system means a system that is not open to atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

Connector means flanged, screwed, welded, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. For the purpose of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

Control device means an enclosed combustion device, vapor recovery system, or flare.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver in VHAP service, and any control devices or systems required by this subpart.

First attempt at repair means to take rapid action for the purpose of stopping or reducing leakage of organic material to atmosphere using best practices.

In gas/vapor service means that a piece of equipment contains process fluid that is in the gaseous state at operating conditions.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgement and standards such as ASME B31.3, Process Piping (available from the American Society of Mechanical Engineers, PO Box 2900, Fairfield, NJ 07007-2900).

In liquid service means that a piece of equipment is not in gas/vapor service.

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.

In VHAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant (VHAP) as determined according to the provisions of § 61.245(d). The provisions of § 61.245(d) also specify how to determine that a piece of equipment is not in VHAP service.

In VOC service means, for the purposes of this subpart, that (a) the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight (see 40 CFR 60.2 for the definition of volatile organic compound or VOC and 40 CFR 60.485(d) to determine whether a piece of equipment is not in VOC service) and (b) the piece of equipment is not in heavy liquid service as defined in 40 CFR 60.481.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the total VHAP in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored or transferred at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss From External Floating-Roof Tanks (incorporated by reference as specified in § 61.18); or

(2) As obtained from standard reference texts; or

(3) As determined by the American Society for Testing and Materials Method D2879-83, Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope (incorporated by reference as specified in § 61.18); or

(4) Any other method approved by the Administrator.

Open-ended valve or line means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

Process unit means equipment assembled to produce a VHAP or its derivatives as intermediates or final products, or equipment assembled to use a VHAP in the production of a product. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient product storage facilities.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit shutdowns.

Repaired means that equipment is adjusted, or otherwise altered, to eliminate a leak.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

Semiannual means a 6-month period; the first semiannual period concludes on the last day of the last month during the 180 days following initial startup for new sources; and the first semiannual period concludes on the last day of the last full month during the 180 days after the effective date of a specific subpart that references this subpart for existing sources.

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Stuffing box pressure means the fluid (liquid or gas) pressure inside the casing or housing of a piece of equipment, on the process side of the inboard seal.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within a process unit when in-process storage, mixing, or management of flow rates of volumes is needed on a recurring or ongoing basis to assist in production of a product.

Volatile hazardous air pollutant or *VHAP* means a substance regulated under this part for which a standard for equipment leaks of the substance has been proposed and promulgated. Benzene is a VHAP. Vinyl chloride is a VHAP.

[49 FR 23513, June 6, 1984; 49 FR 38946, Oct. 2, 1984, as amended at 51 FR 34915, Sept. 30, 1986; 54 FR 38076, Sept. 14, 1989; 65 FR 62158, Oct. 17, 2000; 65 FR 78280, Dec. 14, 2000]

§ 61.242-1 Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§ 61.242-1 to 61.242-11 for each new and existing source as required in 40 CFR 61.05, except as provided in §§ 61.243 and 61.244.

(b) Compliance with this subpart will be detemined by review of records, review of performance test results, and inspection using the methods and procedures specified in § 61.245.

(c)(1) An owner or operator may request a determination of alternative means of emission limitation to the requirements of §§ 61.242-2, 61.242-3, 61.242-5, 61.242-6, 61.242-7, 61.242-8, 61.242-9 and 61.242-11 as provided in § 61.244.

(2) If the Administrator makes a determination that a means of emission limitation is at least a permissible alternative to the requirements of § 61.242-2, 61.242-3, 61.242-5, 61.242-6, 61.242-7, 61.242-8, 61.242-9 or 61.242-11, an owner or operator shall comply with the requirements of that determination.

(d) Each piece of equipment to which this subpart applies shall be marked in such a manner that it can be distinquished readily from other pieces of equipment.

(e) Equipment that is in vacuum service is excluded from the requirements of § 61.242-2, to § 61.242-11 if it is identified as required in § 61.246(e)(5).

[49 FR 23513, June 6, 1984; 49 FR 38946, Oct. 2, 1984]

§ 61.242-2 Standards: Pumps.

(a)(1) Each pump shall be monitored monthly to detect leaks by the methods specified in § 61.245(b), except as provided in § 61.242-1(c) and paragraphs (d), (e), (f) and (g) of this section.

(2) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 61.242-10.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (a) and (b) of this section, provided the following requirements are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of § 61.242-11; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to atmosphere.

(2) The barrier fluid is not in VHAP service and, if the pump is covered by standards under 40 CFR part 60, is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(i) If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in § 61.245 to determine the presence of VOC and VHAP in the barrier fluid.

(ii) If the monitor reading (taking into account any background readings) indicates the presence of VHAP, a leak is detected. For the purpose of this paragraph, the monitor may be calibrated with VHAP, or may employ a gas chromatography column to limit the response of the monitor to VHAP, at the option of the owner or operator.

(iii) If an instrument reading of 10,000 ppm or greater (total VOC) is measured, a leak is detected.

(5) Each sensor as described in paragraph (d)(3) of this section is checked daily or is equipped with an audible alarm.

(6)(i) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (d)(6)(i) of this section, or if, based on the criteria established in paragraph (d)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in § 61.242-10.

(iv) A first attempt at repair shall be made no later than five calendar days after each leak is detected.

(e) Any pump that is designated, as described in § 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) if the pump:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in § 61.245(c), and

(3) Is tested for compliance with paragraph (e)(2) initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or fuel gas system or to a control device that complies with the requirements of § 61.242-11, it is exempt from the requirements of paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in § 61.246(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

[49 FR 23513, June 6, 1984, as amended at 49 FR 38946, Oct. 2, 1984; 55 FR 28349, July 10, 1990; 65 FR 78281, Dec. 14, 2000]

§ 61.242-3 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to atmosphere, except as provided in § 61.242-1(c) and paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of § 61.242-11; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to atmosphere.

(c) The barrier fluid shall not be in VHAP service and, if the compressor is covered by standards under 40 CFR part 60, shall not be in VOC service.

(d) Each barrier fluid system as described in paragraphs (a)-(c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm unless the compressor is located within the boundary of an unmanned plant site.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 61.242-10.

(2) A first attempt at repair shall be made no later than 5 calendar days after eack leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of § 61.242-11, except as provided in paragraph (i) of this section.

(i) Any Compressor that is designated, as described in § 61.246(e)(2), for no detectable emission as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of paragraphs (a)-(h) if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in § 61.245(c); and

(2) Is tested for compliance with paragraph (i)(1) initially upon designation, annually, and at other times requested by the Administrator.

[49 FR 23513, June 6, 1984; 49 FR 38946, Oct. 2, 1984, as amended at 65 FR 78281, Dec. 14, 2000]

§ 61.242-4 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in § 61.245(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 61.242-10.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in § 61.245(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in § 61.242-11 is exempt from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 61.242-10.

[49 FR 23513, June 6, 1984; 49 FR 38946, Oct. 2, 1984, as amended at 65 FR 78281, Dec. 14, 2000]

§ 61.242-5 Standards: Sampling connecting systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed vent system, except as provided in § 61.242-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of § 61.242-11; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(i) A waste management unit as defined in 40 CFR 63.111 if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams; or

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

[65 FR 78281, Dec. 14, 2000]

§ 61.242-6 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 61.242-1(c).

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

[49 FR 23513, June 6, 1984, as amended at 65 FR 78282, Dec. 14, 2000]

§ 61.242-7 Standards: Valves.

(a) Each valve shall be monitored monthly to detect leaks by the method specified in § 61.245(b) and shall comply with paragraphs (b)-(e), except as provided in paragraphs (f), (g), and (h) of this section, § 61.243-1 or § 61.243-2, and § 61.242-1(c).

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in § 61.242-10.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts; and

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in § 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:

(1) Has no external actuating mechanism in contact with the process fluid;

(2) Is operated with emissions less than 500 ppm above background, as measured by the method specified in § 61.245(c); and

(3) Is tested for compliance with paragraph (f)(2) initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in § 61.246(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a); and

(2) The owner or operator of the valve has a written plan that requires monitoring of the valve as frequent as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in § 61.246(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;

(2) The process unit within which the valve is located is an existing process unit; and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

§ 61.242-8 Standards: Pressure relief services in liquid service and connectors.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pressure relief devices in liquid service and connectors, the owner or operator shall follow either one of the following procedures, except as provided in § 61.242-1(c):

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in § 61.245(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 61.242-10.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under § 61.242-7(e).

[49 FR 23513, June 6, 1984; 49 FR 38946, Oct. 2, 1984, as amended at 65 FR 78282, Dec. 14, 2000]

§ 61.242-9 Standards: Surge control vessels and bottoms receivers.

Each surge control vessel or bottoms receiver that is not routed back to the process and that meets the conditions specified in table 1 or table 2 of this subpart shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel back to the process or to a control device as described in § 61.242-11, except as provided in § 61.242-1(c); or comply with the requirements of 40 CFR 63.119(b) or (c).

[65 FR 78282, Dec. 14, 2000]

§ 61.242-10 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the process and that does not remain in VHAP service.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with § 61.242-11.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

[49 FR 23513, June 6, 1984, as amended at 65 FR 78282, Dec. 14, 2000]

§ 61.242-11 Standards: Closed-vent systems and control devices.

(a) Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in § 61.242-1(c).

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the organic vapors vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

(c) Enclosed combustion devices shall be designed and operated to reduce the VHAP emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 °C.

(d) Flares shall used to comply with this subpart shall comply with the requirements of § 60.18.

(e) Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraph (f)(1) or (2) of this section, as applicable.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the following requirements:

(i) Conduct an initial inspection according to the procedures in § 61.245(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in § 61.245(b); and

(ii) Conduct annual inspections according to the procedures in § 61.245(b).

(g) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (2) of this section.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe-to-inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (2) of this section if they comply with the following requirements:

(1) The owner or operator determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (f)(1)(i) or (2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult-to-inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (2) of this section if they comply with the following requirements:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the following information:

(1) Identification of all parts of the closed vent system that are designated as unsafe-to-inspect, an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult-to-inspect, an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in § 61.246(c).

(4) For each inspection conducted in accordance with § 61.245(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

[49 FR 23513, June 6, 1984; 49 FR 38946, Oct. 2, 1984, as amended at 51 FR 2702, Jan. 21, 1986; 65 FR 62158, Oct. 17, 2000; 65 FR 78282, Dec. 14, 2000]

§ 61.243-1 Alternative standards for valves in VHAP service—allowable percentage of valves leaking.

(a) An owner or operator may elect to have all valves within a process unit to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator decides to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to have all valves within a process unit to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in § 61.247(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with § 61.242-7(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in VHAP service within the process unit shall be monitored within 1 week by the methods specified in § 61.245(b).

(2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves in VHAP service for which leaks are detected by the number of valves in VHAP service within the process unit.

(d) Owner or operators who elect to have all valves comply with this alternative standard shall not have a process unit with a leak percentage greater than 2.0 percent.

(e) If an owner or operator decides no longer to comply with § 61.243-1, the owner or operator must notify the Administrator in writing that the work practice standard described in § 61.242-7(a)-(e) will be followed.

§ 61.243-2 Alternative standards for valves in VHAP service—skip period leak detection and repair.

(a)(1) An owner or operator may elect for all valves within a process unit to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in § 61.247(d).

(b)(1) An owner or operator shall comply initially with the requirements for valves, as described in § 61.242-7.

(2) After 2 consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves in VHAP service.

(3) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves in VHAP service.

(4) If the percentage of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in § 61.242-7 but may again elect to use this section.

[49 FR 23513, June 6, 1984, as amended at 65 FR 62158, Oct. 17, 2000]

§ 61.244 Alternative means of emission limitation.

(a) Permission to use an alternative means of emission limitation under section 112(e)(3) of the Clean Air Act shall be governed by the following procedures:

(b) Where the standard is an equipment, design, or operational requirement:

(1) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation to test data for the equipment, design, and operational requirements.

(2) The Administrator may condition the permission on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Where the standard is a work practice:

(1) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.

(2) For each source for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.

(3) For each source for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for permission shall commit in writing each source to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.

(5) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4).

(6) The Administrator may condition the permission on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practices of this subpart.

(d) An owner or operator may offer a unique approach to demonstrate the alternative means of emission limitation.

(e)(1) Manufacturers of equipment used to control equipment leaks of a VHAP may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the VHAP achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will grant permission according to the provisions of paragraphs (b), (c), and (d).

[49 FR 23513, June 6, 1984, as amended at 65 FR 62158, Oct. 17, 2000]

§ 61.245 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Monitoring, as required in §§ 61.242, 61.243, 61.244, and 61.135, shall comply with the following requirements:

(1) Monitoring shall comply with Method 21 of appendix A of 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.

(4) Calibration gases shall be:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.

(c) When equipment is tested for compliance with or monitored for no detectable emissions, the owner or operator shall comply with the following requirements:

(1) The requirements of paragraphs (b) (1) through (4) shall apply.

(2) The background level shall be determined, as set forth in Method 21.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d)(1) Each piece of equipment within a process unit that can conceivably contain equipment in VHAP service is presumed to be in VHAP service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service. For a piece of equipment to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10 percent by weight. For purposes of determining the percent VHAP content of the process fluid that is contained in or contacts equipment, procedures that conform to the methods described in ASTM Method D-2267 (incorporated by the reference as specified in § 61.18) shall be used.

(2)(i) An owner or operator may use engineering judgment rather than the procedures in paragraph (d)(1) of this section to demonstrate that the percent VHAP content does not exceed 10 percent by weight, provided that the engineering judgment demonstrates that the VHAP content clearly does not exceed 10 percent by weight. When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in VHAP service, however, the procedures in paragraph (d)(1) of this section shall be used to resolve the disagreement.

(ii) If an owner or operator determines that a piece of equipment is in VHAP service, the determination can be revised only after following the procedures in paragraph (d)(1) of this section.

(3) Samples used in determining the percent VHAP content shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(e)(1) Method 22 of appendix A of 40 CFR part 60 shall be used to determine compliance of flares with the visible emission provisions of this subpart.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K\left(\sum_{i=1}^{n} C_i H_i\right)$$

Where:

H_T = Net heating value of the sample, MJ/scm (BTU/scf); where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg (77 °F and 14.7 psi), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F).

K = conversion constant, 1.740×10^{7} (g-mole) (MJ)/(ppm-scm-kcal) (metric units); or 4.674×10^{8} ((g-mole) (Btu)/(ppm-scf-kcal)) (English units)

Ci = Concentration of sample component "i" in ppm, as measured by Method 18 of appendix A to 40 CFR part 60 and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference as specified in § 61.18).

H_i = net heat of combustion of sample component "i" at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 61.18) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Method 2, 2A, 2C, or 2D, as appropriate, by the unobstructed (free) cross section area of the flare tip.

(5) The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation:

$$V_{max} = K_1 + K_2 H_T$$

Where:

V_{max} = Maximum permitted velocity, m/sec (ft/sec).

H_T = Net heating value of the gas being combusted, as determined in paragraph (e)(3) of this section, MJ/scm (Btu/scf).

K_1 = 8.706 m/sec (metric units)

= 28.56 ft/sec (English units)

K_2 = 0.7084 m^4 /(MJ-sec) (metric units)

= 0.087 ft^4 /(Btu-sec) (English units)

[49 FR 23513, June 6, 1984, as amended at 49 FR 38946, Oct. 2, 1984; 49 FR 43647, Oct. 31, 1984; 53 FR 36972, Sept. 23, 1988; 54 FR 38077, Sept. 14, 1989; 65 FR 62158, Oct. 17, 2000]

§ 61.246 Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one process unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by each process unit.

(b) When each leak is detected as specified in §§ 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in § 61.242-7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment, except on a valve, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§ 61.242-2, 61.242-3. 61.242-7, 61.242-8, and 61.135, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) “Above 10,000” if the maximum instrument reading measured by the methods specified in § 61.245(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed-vent systems and control devices described in § 61.242-11 shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in § 61.242-11(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed-vent systems and control devices required in §§ 61.242-2, 61.242-3, 61.242-4, 61.242-5 and 61.242-9 are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed-vent systems and control devices required in §§ 61.242-2, 61.242-3, 61.242-4, 61.242-5 and 61.242-9.

(e) The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment (except welded fittings) subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background.

(ii) The designation of this equipment for no detectable emissions shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with § 61.242-4(a).

(4)(i) The dates of each compliance test required in §§ 61.242-2(e), 61.242-3(i), 61.242-4, 61.242-7(f), and 61.135(g).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(f) The following information pertaining to all valves subject to the requirements of § 61.242-7(g) and (h) and to all pumps subject to the requirements of § 61.242-2(g) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves and pumps that are designated as unsafe to monitor, an explanation for each valve or pump stating why the valve or pump is unsafe to monitor, and the plan for monitoring each valve or pump.

(2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(g) The following information shall be recorded for valves complying with § 61.243-2:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in §§ 61.242-2(d)(5), 61.242-3(e)(2), and 61.135(e)(4) and an explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in the applicability section of this subpart and other specific subparts:

(1) An analysis demonstrating the design capacity of the process unit, and

(2) An analysis demonstrating that equipment is not in VHAP service.

(j) Information and data used to demonstrate that a piece of equipment is not in VHAP service shall be recorded in a log that is kept in a readily accessible location.

[49 FR 23513, June 6, 1984, as amended at 49 FR 38946, Oct. 2, 1984; 54 FR 38077, Sept. 14, 1989; 65 FR 78283, Dec. 14, 2000]

§ 61.247 Reporting requirements.

(a)(1) An owner or operator of any piece of equipment to which this subpart applies shall submit a statement in writing notifying the Administrator that the requirements of §§ 61.242, 61.245, 61.246, and 61.247 are being implemented.

(2) In the case of an existing source or a new source which has an initial startup date preceding the effective date, the statement is to be submitted within 90 days of the effective date, unless a waiver of compliance is granted under § 61.11, along with the information required under § 61.10. If a waiver of compliance is granted, the statement is to be submitted on a date scheduled by the Administrator.

(3) In the case of new sources which did not have an initial startup date preceding December 14, 2000, the statement required under paragraph (a)(1) of this section shall be submitted with the application for approval of construction, as described in § 61.07.

(4) For owners and operators complying with 40 CFR part 65, subpart C or F, the statement required under paragraph (a)(1) of this section shall notify the Administrator that the requirements of 40 CFR part 65, subpart C or F, are being implemented.

(5) The statement is to contain the following information for each source:

(i) Equipment identification number and process unit identification.

(ii) Type of equipment (for example, a pump or pipeline valve).

(iii) Percent by weight VHAP in the fluid at the equipment.

(iv) Process fluid state at the equipment (gas/vapor or liquid).

(v) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").

(b) A report shall be submitted to the Administrator semiannually starting 6 months after the initial report required in paragraph (a) of this section, that includes the following information:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in § 61.242-7(b) of § 61.243-2.

(ii) Number of valves for which leaks were not repaired as required in § 61.242-7(d).

(iii) Number of pumps for which leaks were detected as described in § 61.242-2 (b) and (d)(6).

(iv) Number of pumps for which leaks were not repaired as required in § 61.242-2 (c) and (d)(6).

(v) Number of compressors for which leaks were detected as described in § 61.242-3(f).

(vi) Number of compressors for which leaks were not repaired as required in § 61.242-3(g).

(vii) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (a) if changes have occurred since the initial report or subsequent revisions to the initial report.

NOTE: Compliance with the requirements of § 61.10(c) is not required for revisions documented under this paragraph.

(5) The results of all performance tests and monitoring to determine compliance with no detectable emissions and with §§ 61.243-1 and 61.243-2 conducted within the semiannual reporting period.

(c) In the first report submitted as required in paragraph (a) of this section, the report shall include a reporting schedule stating the months that semiannual reports shall be submitted. Subsequent reports shall be submitted according to that schedule, unless a revised schedule has been submitted in a previous semiannual report.

(d) An owner or operator electing to comply with the provisions of §§ 61.243-1 and 61.243-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An application for approval of construction or modification, §§ 61.05(a) and 61.07, will not be required if—

(1) The new source complies with the standard, § 61.242;

(2) The new source is not part of the construction of a process unit; and

(3) In the next semiannual report required by paragraph (b) of this section, the information in paragraph (a)(5) of this section is reported.

(f) For owners or operators choosing to comply with 40 CFR part 65, subpart C or F, an application for approval of construction or modification, as required under §§ 61.05 and 61.07 will not be required if:

(1) The new source complies with 40 CFR 65.106 through 65.115 and with 40 CFR part 65, subpart C, for surge control vessels and bottoms receivers;

(2) The new source is not part of the construction of a process unit; and

(3) In the next semiannual report required by 40 CFR 65.120(b) and 65.48(b), the information in paragraph (a)(5) of this section is reported.

[49 FR 23513, June 6, 1984, as amended at 49 FR 38947, Oct. 2, 1984; 54 FR 38077, Sept. 14, 1989; 65 FR 78283, Dec. 14, 2000]

Table 1 to Subpart V of Part 61—Surge Control Vessels and Bottoms Receivers at Existing Sources

Vessel capacity (cubic meters)	Vapor pressure [1] (kilopascals)
75 ≤ capacity < 151	≥ 13.1
151 ≤ capacity	≥ 5.2

[1] Maximum true vapor pressure as defined in § 61.241.

[65 FR 78283, Dec. 14, 2000]

Table 2 to Subpart V of Part 61—Surge Control Vessels and Bottoms Receivers at New Sources

Vessel capacity (cubic meters)	Vapor pressure [1] (kilopascals)
38 ≤ capacity < 151	≥ 13.1
151 ≤ capacity	≥ 0.7

[1] Maximum true vapor pressure as defined in § 61.241.

[65 FR 78283, Dec. 14, 2000]

Attachment D

Part 70 Operating Permit No: T 089-29424-00345

[Downloaded from the eCFR on May 21, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart EEEE—National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)

Source: 69 FR 5063, Feb. 3, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.2330 What is the purpose of this subpart?

This subpart establishes national emission limitations, operating limits, and work practice standards for organic hazardous air pollutants (HAP) emitted from organic liquids distribution (OLD) (non-gasoline) operations at major sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations, operating limits, and work practice standards.

§ 63.2334 Am I subject to this subpart?

(a) Except as provided for in paragraphs (b) and (c) of this section, you are subject to this subpart if you own or operate an OLD operation that is located at, or is part of, a major source of HAP emissions. An OLD operation may occupy an entire plant site or be collocated with other industrial (*e.g.,* manufacturing) operations at the same plant site.

(b) Organic liquid distribution operations located at research and development facilities, consistent with section 112(c)(7) of the Clean Air Act (CAA), are not subject to this subpart.

(c) Organic liquid distribution operations do not include the activities and equipment, including product loading racks, used to process, store, or transfer organic liquids at facilities listed in paragraph (c) (1) and (2) of this section.

(1) Oil and natural gas production field facilities, as the term "facility" is defined in § 63.761 of subpart HH.

(2) Natural gas transmission and storage facilities, as the term "facility" is defined in § 63.1271 of subpart HHH.

§ 63.2338 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing OLD operation affected source.

(b) Except as provided in paragraph (c) of this section, the affected source is the collection of activities and equipment used to distribute organic liquids into, out of, or within a facility that is a major source of HAP. The affected source is composed of:

(1) All storage tanks storing organic liquids.

(2) All transfer racks at which organic liquids are loaded into or unloaded out of transport vehicles and/or containers.

(3) All equipment leak components in organic liquids service that are associated with:

(i) Storage tanks storing organic liquids;

(ii) Transfer racks loading or unloading organic liquids;

(iii) Pipelines that transfer organic liquids directly between two storage tanks that are subject to this subpart;

(iv) Pipelines that transfer organic liquids directly between a storage tank subject to this subpart and a transfer rack subject to this subpart; and

(v) Pipelines that transfer organic liquids directly between two transfer racks that are subject to this subpart.

(4) All transport vehicles while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(5) All containers while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(c) The equipment listed in paragraphs (c)(1) through (4) of this section and used in the identified operations is excluded from the affected source.

(1) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another 40 CFR part 63 national emission standards for hazardous air pollutants (NESHAP).

(2) Non-permanent storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used in special situation distribution loading and unloading operations (such as maintenance or upset liquids management).

(3) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used to conduct maintenance activities, such as stormwater management, liquid removal from tanks for inspections and maintenance, or changeovers to a different liquid stored in a storage tank.

(d) An affected source is a new affected source if you commenced construction of the affected source after April 2, 2002, and you meet the applicability criteria in § 63.2334 at the time you commenced operation.

(e) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

(f) An affected source is existing if it is not new or reconstructed.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42904, July 28, 2006]

§ 63.2342 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to the schedule identified in paragraph (a)(1), (a)(2), or (a)(3) of this section, as applicable.

(1)(i) Except as provided in paragraph (a)(1)(ii) of this section, if you startup your new affected source on or before February 3, 2004 or if you reconstruct your affected source on or before February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart no later than February 3, 2004.

(ii) For any emission source listed in paragraph § 63.2338(b) at an affected source that commenced construction or reconstruction after April 2, 2002, but before February 3, 2004, that is required to be controlled based on the applicability criteria in this subpart, but:

(A) Would not have been required to be controlled based on the applicability criteria as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source based on the schedule found in paragraph (b) of this section or at startup, whichever is later; or

(B) Would have been subject to a less stringent degree of control requirement as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in paragraph (b) of this section or at startup, whichever is later, and if you start up your affected new or reconstructed source before February 5, 2007, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source as proposed for this subpart, until you are required to comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in paragraph (b) of this section.

(2) If you commence construction of or reconstruct your affected source after February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart upon startup of your affected source.

(3) If, after startup of a new affected source, the total actual annual facility-level organic liquid loading volume at that source exceeds the criteria for control in Table 2 to this subpart, items 9 and 10, the owner or operator must comply with the transfer rack requirements specified in § 63.2346(b) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(b)(1) If you have an existing affected source, you must comply with the emission limitations, operating limits, and work practice standards for existing affected sources no later than February 5, 2007, except as provided in paragraphs (b)(2) and (3) of this section.

(2) Floating roof storage tanks at existing affected sources must be in compliance with the work practice standards in Table 4 to this subpart, item 1, at all times after the next degassing and cleaning activity or within 10 years after February 3, 2004, whichever occurs first. If the first degassing and cleaning activity occurs during the 3 years following February 3, 2004, the compliance date is February 5, 2007.

(3)(i) If an addition or change other than reconstruction as defined in § 63.2 is made to an existing affected facility that causes the total actual annual facility-level organic liquid loading volume to exceed the criteria for control in Table 2 to this subpart, items 7 and 8, the owner or operator must comply with the transfer rack requirements specified in § 63.2346(b) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(ii) If the owner or operator believes that compliance with the transfer rack emission limits cannot be achieved immediately, as specified in paragraph (b)(3)(i) of this section, the owner or operator may submit a request for a compliance extension, as specified in paragraphs (b)(3)(ii)(A) through (I) of this section. Subject to paragraph (b)(3)(ii)(B) of this section, until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph (b)(3)(ii), the owner or operator of the transfer rack subject to the requirements of this section shall comply with all applicable requirements of this subpart. Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(A) *Submittal.* The owner or operator shall submit a request for a compliance extension to the Administrator (or a State, when the State has an approved 40 CFR part 70 permit program and the source is required to obtain a 40 CFR part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source) seeking an extension allowing the source up to 1 additional year to comply with the transfer rack standard, if such additional period is necessary for the installation of controls. The owner or operator of the affected source who has requested an extension of compliance under this paragraph (b)(3)(ii)(A) and who is otherwise required to obtain a title V permit shall apply for such permit, or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph (b)(3)(ii)(A) will be incorporated into the affected source's title V permit according to the provisions of 40 CFR part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) *When to submit.* (*1*) Any request submitted under paragraph (b)(3)(ii)(A) of this section must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraph (b)(3)(i) of this section), except as provided for in paragraph (b)(3)(ii)(B)(*2*) of this section. Nonfrivolous

requests submitted under this paragraph (b)(3)(ii)(B)(*1*) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial.

(*2*) An owner or operator may submit a compliance extension request after the date specified in paragraph (b)(3)(ii)(B)(*1*) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (b)(3)(ii)(C) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph (b)(3)(ii)(B)(*2*) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(C) *Information required.* The request for a compliance extension under paragraph (b)(3)(ii)(A) of this section shall include the following information:

(*1*) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(*2*) The name, address, and telephone number of a contact person for further information;

(*3*) An identification of the organic liquid distribution operation and of the specific equipment for which additional compliance time is required;

(*4*) A description of the controls to be installed to comply with the standard;

(*5*) Justification for the length of time being requested; and

(*6*) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*i*) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated;

(*ii*) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(*iii*) The date by which final compliance is to be achieved.

(D) *Approval of request for extension of compliance.* Based on the information provided in any request made under paragraph (b)(3)(ii)(C) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with the transfer rack emission standard, as specified in paragraph (b)(3)(ii) of this section. The extension will be in writing and will—

(*1*) Identify each affected source covered by the extension;

(*2*) Specify the termination date of the extension;

(*3*) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(*4*) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests);

(*5*) Specify the contents of the progress reports to be submitted and the dates by which such reports are to be submitted, if required pursuant to paragraph (b)(3)(ii)(E) of this section.

(*6*) Under paragraph (b)(3)(ii) of this section, specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period.

(E) *Progress reports.* The owner or operator of an existing source that has been granted an extension of compliance under paragraph (b)(3)(ii)(D) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached.

(F) *Notification of approval or intention to deny.* (*1*) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (b)(3)(ii) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application; that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. Failure by the Administrator to act within 30 calendar days to approve or disapprove a request submitted under paragraph (b)(3)(ii) of this section does not constitute automatic approval of the request.

(*2*) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(*3*) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with:

(*i*) Notice of the information and findings on which the intended denial is based; and

(*ii*) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(*4*) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(G) *Termination of extension of compliance.* The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (b)(3)(ii)(D)(*3*) or paragraph (b)(3)(ii)(D)(*4*) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(*1*) Notice of the reason for termination; and

(*2*) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(*3*) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(H) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the CAA.

(I) *Limitation on use of compliance extension.* The owner or operator may request an extension of compliance under the provisions specified in paragraph (b)(3)(ii) of this section only once for each facility.

(c) If you have an area source that does not commence reconstruction but increases its emissions or its potential to emit such that it becomes a major source of HAP emissions and an existing affected source subject to this subpart, you must be in compliance by 3 years after the area source becomes a major source.

(d) You must meet the notification requirements in §§ 63.2343 and 63.2382(a), as applicable, according to the schedules in § 63.2382(a) and (b)(1) through (3) and in subpart A of this part. Some of these notifications must be submitted before the compliance dates for the emission limitations, operating limits, and work practice standards in this subpart.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42905, July 28, 2006]

§ 63.2343 What are my requirements for emission sources not requiring control?

This section establishes the notification, recordkeeping, and reporting requirements for emission sources identified in § 63.2338 that do not require control under this subpart (i.e., under paragraphs (a) through (e) of § 63.2346). Such emission sources are not subject to any other notification, recordkeeping, or reporting sections in this subpart, including § 63.2350(c), except as indicated in paragraphs (a) through (d) of this section.

(a) For each storage tank subject to this subpart having a capacity of less than 18.9 cubic meters (5,000 gallons) and for each transfer rack subject to this subpart that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), you must keep documentation that verifies that each storage tank and transfer rack identified in paragraph (a) of this section is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location. The documentation may consist of identification of the tanks and transfer racks identified in paragraph (a) of this section on a plant site plan or process and instrumentation diagram (P&ID).

(b) For each storage tank subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that is not subject to control based on the criteria specified in Table 2 to this subpart, items 1 through 6, you must comply with the requirements specified in paragraphs (b)(1) through (3) of this section.

(1)(i) You must submit the information in § 63.2386(c)(1), (2), (3), and (10)(i) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or in your first Compliance report, according to the schedule specified in § 63.2386(b), whichever occurs first.

(ii)(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in § 63.2386(c)(10)(i) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes specified in paragraph (d) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under § 63.2386(c), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each storage tank that meets the conditions identified in paragraph (b) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)(i) You must submit a subsequent Compliance report according to the schedule in § 63.2386(b) whenever any of the events in paragraph (d) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in § 63.2386(c)(1), (2), (3) and, as applicable, in § 63.2386(d)(3) and (4). If you are already submitting a subsequent Compliance report under § 63.2386(d), you do not need to submit a separate subsequent Compliance report for each storage tank that meets the conditions identified in paragraph (b) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each storage tank that meets the conditions identified in paragraph (b) of this section, you must keep documentation, including a record of the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid, that verifies the storage tank is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location.

(c) For each transfer rack subject to this subpart that loads organic liquids but is not subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with the requirements specified in paragraphs (c)(1) through (3) of this section.

(1)(i) You must submit the information in § 63.2386(c)(1), (2), (3), and (10)(i) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or a first Compliance report, according to the schedule specified in § 63.2386(b), whichever occurs first.

(ii)(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in § 63.2386(c)(10)(i) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes specified in paragraph (d) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under § 63.2386(c), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each transfer rack that meets the conditions identified in paragraph (b) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)(i) You must submit a subsequent Compliance report according to the schedule in § 63.2386(b) whenever any of the events in paragraph (d) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in § 63.2386(c)(1), (2), (3) and, as applicable, in § 63.2386(d)(3) and (4). If you are already submitting a subsequent Compliance report under § 63.2386(d), you do not need to submit a separate subsequent Compliance report for each transfer rack that meets the conditions identified in paragraph (c) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each transfer rack that meets the conditions identified in paragraph (c) of this section, you must keep documentation, including the records specified in § 63.2390(d), that verifies the transfer rack is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location.

(d) If one or more of the events identified in paragraphs (d)(1) through (4) of this section occur since the filing of the Notification of Compliance Status or the last Compliance report, you must submit a subsequent Compliance report as specified in paragraphs (b)(2) and (c)(2) of this section.

(1) Any storage tank or transfer rack became subject to control under this subpart EEEE; or

(2) Any storage tank equal to or greater than 18.9 cubic meters (5,000 gallons) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of this subpart; or

(3) Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or

(4) Any of the information required in § 63.2386(c)(1), § 63.2386(c)(2), or § 63.2386(c)(3) has changed.

[71 FR 42906, July 28, 2006, as amended at 73 FR 21830, Apr. 23, 2008]

Emission Limitations, Operating Limits, and Work Practice Standards

§ 63.2346 What emission limitations, operating limits, and work practice standards must I meet?

(a) *Storage tanks.* For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, items 1 through 5, you must comply with paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section. For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, item 6, you must comply with paragraph (a)(1), (a)(2), or (a)(4) of this section.

(1) Meet the emission limits specified in Table 2 to this subpart and comply with the applicable requirements specified in 40 CFR part 63, subpart SS, for meeting emission limits, except substitute the term “storage tank” at each occurrence of the term “storage vessel” in subpart SS.

(2) Route emissions to fuel gas systems or back into a process as specified in 40 CFR part 63, subpart SS.

(3) Comply with 40 CFR part 63, subpart WW (control level 2).

(4) Use a vapor balancing system that complies with the requirements specified in paragraphs (a)(4)(i) through (vii) of this section and with the recordkeeping requirements specified in § 63.2390(e).

(i) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the transport vehicle from which the storage tank is filled.

(ii) Transport vehicles must have a current certification in accordance with the United States Department of Transportation (U.S. DOT) pressure test requirements of 49 CFR part 180 for cargo tanks and 49 CFR 173.31 for tank cars.

(iii) Organic liquids must only be unloaded from cargo tanks or tank cars when vapor collection systems are connected to the storage tank's vapor collection system.

(iv) No pressure relief device on the storage tank, or on the cargo tank or tank car, shall open during loading or as a result of diurnal temperature changes (breathing losses).

(v) Pressure relief devices must be set to no less than 2.5 pounds per square inch guage (psig) at all times to prevent breathing losses. Pressure relief devices may be set at values less than 2.5 psig if the owner or operator provides rationale in the notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times. The owner or operator shall comply with paragraphs (a)(4)(v)(A) through (C) of this section for each pressure relief valve.

(A) The pressure relief valve shall be monitored quarterly using the method described in § 63.180(b).

(B) An instrument reading of 500 parts per million by volume (ppmv) or greater defines a leak.

(C) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of § 63.181(d)(1) through (4).

(vi) Cargo tanks and tank cars that deliver organic liquids to a storage tank must be reloaded or cleaned at a facility that utilizes the control techniques specified in paragraph (a)(4)(vi)(A) or (a)(4)(vi)(B) of this section.

(A) The cargo tank or tank car must be connected to a closed-vent system with a control device that reduces inlet emissions of total organic HAP by 95 percent by weight or greater or to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air.

(B) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the cargo tank or tank car during reloading must be used to route the collected vapor to the storage tank from which the liquid being transferred originated or to another storage tank connected to a common header.

(vii) The owner or operator of the facility where the cargo tank or tank car is reloaded or cleaned must comply with paragraphs (a)(4)(vii)(A) through (D) of this section.

(A) Submit to the owner or operator of the storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of paragraph (a)(4)(vii)(A) through (C) of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the storage tank giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this paragraph (a)(4)(vii) of this section.

(B) If complying with paragraph (a)(4)(vi)(A) of this section, comply with the requirements for a closed vent system and control device as specified in this subpart EEEE. The notification requirements in § 63.2382 and the reporting requirements in § 63.2386 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(C) If complying with paragraph (a)(4)(vi)(B) of this section, keep the records specified in § 63.2390(e)(3) or equivalent recordkeeping approved by the Administrator.

(D) After the compliance dates specified in § 63.2342, at an offsite reloading or cleaning facility subject to § 63.2346(a)(4), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 that has monitoring, recordkeeping, and reporting provisions constitutes compliance with the monitoring, recordkeeping and reporting provisions of § 63.2346(a)(4)(vii)(B) or § 63.2346(a)(4)(vii)(C). You must identify in your notification of compliance status report required by § 63.2382(d) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(b) *Transfer racks.* For each transfer rack that is part of the collection of transfer racks that meets the total actual annual facility-level organic liquid loading volume criterion for control in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (b)(1), (b)(2), or (b)(3) of this section for each arm in the transfer rack loading an organic liquid whose organic HAP content meets the organic HAP criterion for control in Table 2 to this subpart, items 7 through 10. For existing affected sources, you must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) of this section during the loading of organic liquids into transport vehicles. For new affected sources, you must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) and (ii) of this section during the loading of organic liquids into transport vehicles and containers. If the total actual annual facility-level organic liquid loading volume at any affected source is equal to or greater than the loading volume criteria for control in Table 2 to this subpart, but at a later date is less than the loading volume criteria for control, compliance with paragraph (b)(1), (b)(2), or (b)(3) of this section is no longer required. For new sources and reconstructed sources, as defined in § 63.2338(d) and (e), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) and (ii) of this section immediately, as specified in § 63.2342(a)(3). For existing sources, as defined in § 63.2338(f), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) of this section immediately, as specified in § 63.2342(b)(3)(i), unless an alternative compliance schedule has been approved under § 63.2342(b)(3)(ii) and subject to the use limitation specified in § 63.2342(b)(3)(ii)(I).

(1) Meet the emission limits specified in Table 2 to this subpart and comply with the applicable requirements for transfer racks specified in 40 CFR part 63, subpart SS, for meeting emission limits.

(2) Route emissions to fuel gas systems or back into a process as specified in 40 CFR part 63, subpart SS.

(3)(i) Use a vapor balancing system that routes organic HAP vapors displaced from the loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(ii) Use a vapor balancing system that routes the organic HAP vapors displaced from the loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(c) *Equipment leak components.* For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year, you must comply with the applicable requirements under 40 CFR part 63, subpart TT (control level 1), subpart UU (control level 2), or subpart H. Pumps, valves, and sampling connectors that are insulated to provide protection against persistent sub-freezing temperatures are subject to the "difficult to monitor" provisions in the applicable subpart selected by the owner or operator. This paragraph only applies if the affected source has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 to this subpart.

(d) *Transport vehicles.* For each transport vehicle equipped with vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (d)(1) of this section. For each transport vehicle without vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (d)(2) of this section.

(1) Follow the steps in 40 CFR 60.502(e) to ensure that organic liquids are loaded only into vapor-tight transport vehicles and comply with the provisions in 40 CFR 60.502(f) through (i), except substitute the term "transport vehicle" at each occurrence of the term "tank truck" or "gasoline tank truck" in those paragraphs.

(2) Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

(e) *Operating limits.* For each high throughput transfer rack, you must meet each operating limit in Table 3 to this subpart for each control device used to comply with the provisions of this subpart whenever emissions from the loading of organic liquids are routed to the control device. For each storage tank and low throughput transfer rack, you must comply with the requirements for monitored parameters as specified in subpart SS of this part for storage vessels and, during the loading of organic liquids, for low throughput transfer racks, respectively. Alternatively, you may comply with the operating limits in Table 3 to this subpart.

(f) For noncombustion devices, if you elect to demonstrate compliance with a percent reduction requirement in Table 2 to this subpart using total organic compounds (TOC) rather than organic HAP, you must first demonstrate, subject to the approval of the Administrator, that TOC is an appropriate surrogate for organic HAP in your case; that is, for your storage tank(s) and/or transfer rack(s), the percent destruction of organic HAP is equal to or higher than the percent destruction of TOC. This demonstration must be conducted prior to or during the initial compliance test.

(g) As provided in § 63.6(g), you may request approval from the Administrator to use an alternative to the emission limitations, operating limits, and work practice standards in this section. You must follow the procedures in § 63.177(b) through (e) in applying for permission to use such an alternative. If you apply for permission to use an alternative to the emission limitations, operating limits, and work practice standards in this section, you must submit the information described in § 63.6(g)(2).

(h) [Reserved]

(i) Opening of a safety device is allowed at any time that it is required to avoid unsafe operating conditions.

(j) If you elect to comply with this subpart by combining emissions from different emission sources subject to this subpart in a single control device, then you must comply with the provisions specified in § 63.982(f).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42908, July 28, 2006; 73 FR 40981, July 17, 2008; 73 FR 21830, Apr. 23, 2008]

General Compliance Requirements

§ 63.2350 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limits, and work practice standards in this subpart at all times when the equipment identified in § 63.2338(b)(1) through (4) is in OLD operation.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(c) Except for emission sources not required to be controlled as specified in § 63.2343, you must develop a written startup, shutdown, and malfunction (SSM) plan according to the provisions in § 63.6(e)(3).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42909, July 28, 2006]

Testing and Initial Compliance Requirements

§ 63.2354 What performance tests, design evaluations, and performance evaluations must I conduct?

(a)(1) For each performance test that you conduct, you must use the procedures specified in subpart SS of this part and the provisions specified in paragraph (b) of this section.

(2) For each design evaluation you conduct, you must use the procedures specified in subpart SS of this part.

(3) For each performance evaluation of a continuous emission monitoring system (CEMS) you conduct, you must follow the requirements in § 63.8(e).

(b)(1) For nonflare control devices, you must conduct each performance test according to the requirements in § 63.7(e)(1), and either § 63.988(b), § 63.990(b), or § 63.995(b), using the procedures specified in § 63.997(e).

(2) You must conduct three separate test runs for each performance test on a nonflare control device as specified in §§ 63.7(e)(3) and 63.997(e)(1)(v). Each test run must last at least 1 hour, except as provided in § 63.997(e)(1)(v)(A) and (B).

(3)(i) In addition to EPA Method 25 or 25A of 40 CFR part 60, appendix A, to determine compliance with the organic HAP or TOC emission limit, you may use EPA Method 18 of 40 CFR part 60, appendix A, as specified in paragraph (b)(3)(i) of this section. As an alternative to EPA Method 18, you may use ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14), under the conditions specified in paragraph (b)(3)(ii) of this section.

(A) If you use EPA Method 18 to measure compliance with the percentage efficiency limit, you must first determine which organic HAP are present in the inlet gas stream (i.e., uncontrolled emissions) using knowledge of the organic liquids or the screening procedure described in EPA Method 18. In conducting the performance test, you must analyze samples collected as specified in EPA Method 18, simultaneously at the inlet and outlet of the control device. Quantify the emissions for the same organic HAP identified as present in the inlet gas stream for both the inlet and outlet gas streams of the control device.

(B) If you use EPA Method 18 of 40 CFR part 60, appendix A, to measure compliance with the emission concentration limit, you must first determine which organic HAP are present in the inlet gas stream using knowledge of the organic liquids or the screening procedure described in EPA Method 18. In conducting the performance test, analyze samples collected as specified in EPA Method 18 at the outlet of the control device. Quantify the control device outlet emission concentration for the same organic HAP identified as present in the inlet or uncontrolled gas stream.

(ii) You may use ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14), as an alternative to EPA Method 18 if the target concentration is between 150 parts per billion by volume and 100 ppmv and either of the conditions specified in paragraph (b)(2)(ii)(A) or (B) of this section exists. For target compounds not listed in Section 1.1 of ASTM D6420-99 (Reapproved 2004) and not amenable to detection by mass spectrometry, you may not use ASTM D6420-99 (Reapproved 2004).

(A) The target compounds are those listed in Section 1.1 of ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14),; or

(B) For target compounds not listed in Section 1.1 of ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14), but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in ASTM D6420-99 (Reapproved 2004), Section 10.5.3, must be followed, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water-soluble.

(4) If a principal component of the uncontrolled or inlet gas stream to the control device is formaldehyde, you may use EPA Method 316 of appendix A of this part instead of EPA Method 18 of 40 CFR part 60, appendix A, for measuring the formaldehyde. If formaldehyde is the predominant organic HAP in the inlet gas stream, you may use EPA Method 316 alone to measure formaldehyde either at the inlet and outlet of the control device using the formaldehyde control efficiency as a surrogate for total organic HAP or TOC efficiency, or at the outlet of a combustion device for determining compliance with the emission concentration limit.

(5) You may not conduct performance tests during periods of SSM, as specified in § 63.7(e)(1).

(c) To determine the HAP content of the organic liquid, you may use EPA Method 311 of 40 CFR part 63, appendix A, or other method approved by the Administrator. In addition, you may use other means, such as voluntary consensus standards, material safety data sheets (MSDS), or certified product data sheets, to determine the HAP content of the organic liquid. If the method you select to determine the HAP content provides HAP content ranges, you must use the upper end of each HAP content range in determining the total HAP content of the organic liquid. The EPA may require you to test the HAP content of an organic liquid using EPA Method 311 or other method approved by the Administrator. If the results of the EPA Method 311 (or any other approved method) are different from the HAP content determined by another means, the EPA Method 311 (or approved method) results will govern.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42909, July 28, 2006]

§ 63.2358 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) You must conduct initial performance tests and design evaluations according to the schedule in § 63.7(a)(2), or by the compliance date specified in any applicable State or Federal new source review construction permit to which the affected source is already subject, whichever is earlier.

(b)(1) For storage tanks and transfer racks at existing affected sources complying with the emission limitations listed in Table 2 to this subpart, you must demonstrate initial compliance with the emission limitations within 180 days after February 5, 2007, except as provided in paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a.ii. in Table 2 to this subpart and item 1.a. in Table 4 to this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than February 3, 2014.

(ii) For storage tanks complying with item 1.a.ii. or 6.a.ii in Table 2 of this subpart and item 1.b., 1.c., or 2. in Table 4 of this subpart, you must comply within 180 days after April 25, 2011.

(2) For storage tanks and transfer racks at reconstructed or new affected sources complying with the emission limitations listed in Table 2 to this subpart, you must conduct your initial compliance demonstration with the emission limitations within 180 days after the initial startup date for the affected source or February 3, 2004, whichever is later.

(c)(1) For storage tanks at existing affected sources complying with the work practice standard in Table 4 to this subpart, you must conduct your initial compliance demonstration as specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a. in Table 4 of this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than February 3, 2014.

(ii) For other storage tanks not specified in paragraph (c)(1)(i) of this section, you must comply within 180 days after April 25, 2011.

(2) For transfer racks and equipment leak components at existing affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after February 5, 2007.

(d) For storage tanks, transfer racks, and equipment leak components at reconstructed or new affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after the initial startup date for the affected source.

[69 FR 5063, Feb. 3, 2004, as amended at 73 FR 40981, July 17, 2008]

§ 63.2362 When must I conduct subsequent performance tests?

(a) For nonflare control devices, you must conduct subsequent performance testing required in Table 5 to this subpart, item 1, at any time the EPA requests you to in accordance with section 114 of the CAA.

(b)(1) For each transport vehicle that you own that is equipped with vapor collection equipment and that is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must perform the vapor tightness testing required in Table 5 to this subpart, item 2, on that transport vehicle at least once per year.

(2) For transport vehicles that you own that do not have vapor collection equipment, you must maintain current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2366 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain a CMS on each control device required in order to comply with this subpart. If you use a continuous parameter monitoring system (CPMS) (as defined in § 63.981), you must comply with the applicable requirements for CPMS in subpart SS of this part for the control device being used. If you use a continuous emissions monitoring system (CEMS), you must comply with the requirements in § 63.8.

(b) For nonflare control devices controlling storage tanks and low throughput transfer racks, you must submit a monitoring plan according to the requirements in subpart SS of this part for monitoring plans.

§ 63.2370 How do I demonstrate initial compliance with the emission limitations, operating limits, and work practice standards?

(a) You must demonstrate initial compliance with each emission limitation and work practice standard that applies to you as specified in tables 6 and 7 to this subpart.

(b) You demonstrate initial compliance with the operating limits requirements specified in § 63.2346(e) by establishing the operating limits during the initial performance test or design evaluation.

(c) You must submit the results of the initial compliance determination in the Notification of Compliance Status according to the requirements in § 63.2382(d).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

Continuous Compliance Requirements

§ 63.2374 When do I monitor and collect data to demonstrate continuous compliance and how do I use the collected data?

(a) You must monitor and collect data according to subpart SS of this part and paragraphs (b) and (c) of this section.

(b) When using a control device to comply with this subpart, you must monitor continuously or collect data at all required intervals at all times that the emission source and control device are in OLD operation, except for CMS malfunctions (including any malfunction preventing the CMS from operating properly), associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments).

(c) Do not use data recorded during CMS malfunctions, associated repairs, required quality assurance or control activities, or periods when emissions from organic liquids are not routed to the control device in data averages and calculations used to report emission or operating levels. Do not use such data in fulfilling a minimum data availability requirement, if applicable. You must use all of the data collected during all other periods, including periods of SSM, in assessing the operation of the control device.

§ 63.2378 How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?

(a) You must demonstrate continuous compliance with each emission limitation, operating limit, and work practice standard in Tables 2 through 4 to this subpart that applies to you according to the methods specified in subpart SS of this part and in tables 8 through 10 to this subpart, as applicable.

(b) You must follow the requirements in § 63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of paragraphs (b)(1) through (3) of this section apply.

(1) The emission limitations in this subpart apply at all times except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. The emission limitations of this subpart apply during periods of SSM, except as provided in paragraphs (b)(2) and (3) of this section. However, if a SSM, or period of nonoperation of one portion of the affected source does not affect the ability of a particular emission source to comply with the emission limitations to which it is subject, then that emission source is still required to comply with the applicable emission limitations of this subpart during the startup, shutdown, malfunction, or period of nonoperation.

(2) The owner or operator must not shut down control devices or monitoring systems that are required or utilized for achieving compliance with this subpart during periods of SSM while emissions are being routed to such items of equipment if the shutdown would contravene requirements of this subpart applicable to such items of equipment. This paragraph (b)(2) does not apply if the item of equipment is malfunctioning. This paragraph (b)(2) also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous SSM of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a contemporaneous SSM of the affected source of portion thereof, the owner or operator must provide documentation supporting such a claim in the next Compliance report required in table 11 to this subpart, item 1. Once approved by the Administrator, the provision for ceasing to collect, during a SSM, monitoring data that would otherwise be required by the provisions of this subpart must be incorporated into the SSM plan.

(3) During SSM, you must implement, to the extent reasonably available, measures to prevent or minimize excess emissions. For purposes of this paragraph (b)(3), the term "excess emissions" means emissions greater than those allowed by the emission limits that apply during normal operational periods. The measures to be taken must be

identified in the SSM plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Back-up control devices are not required, but may be used if available.

(c) Periods of planned routine maintenance of a control device used to control storage tanks or transfer racks, during which the control device does not meet the emission limits in table 2 to this subpart, must not exceed 240 hours per year.

(d) If you elect to route emissions from storage tanks or transfer racks to a fuel gas system or to a process, as allowed by § 63.982(d), to comply with the emission limits in table 2 to this subpart, the total aggregate amount of time during which the emissions bypass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except SSM or product changeovers of flexible operation units and periods when a storage tank has been emptied and degassed), must not exceed 240 hours.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 20463, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.2382 What notifications must I submit and when and what information should be submitted?

(a) You must submit each notification in subpart SS of this part, table 12 to this subpart, and paragraphs (b) through (d) of this section that applies to you. You must submit these notifications according to the schedule in table 12 to this subpart and as specified in paragraphs (b) through (d) of this section.

(b)(1) *Initial Notification.* If you startup your affected source before February 3, 2004, you must submit the Initial Notification no later than 120 calendar days after February 3, 2004.

(2) If you startup your new or reconstructed affected source on or after February 3, 2004, you must submit the Initial Notification no later than 120 days after initial startup.

(c) If you are required to conduct a performance test, you must submit the Notification of Intent to conduct the test at least 60 calendar days before it is initially scheduled to begin as required in § 63.7(b)(1).

(d)(1) *Notification of Compliance Status.* If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in table 5, 6, or 7 to this subpart, you must submit a Notification of Compliance Status.

(2) The Notification of Compliance Status must include the information required in § 63.999(b) and in paragraphs (d)(2)(i) through (viii) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify organic HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to tables 6 and 7 to this subpart. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) Descriptions of worst-case operating and/or testing conditions for the control device(s).

(v) Identification of emission sources subject to overlapping requirements described in § 63.2396 and the authority under which you will comply.

(vi) The applicable information specified in § 63.1039(a)(1) through (3) for all pumps and valves subject to the work practice standards for equipment leak components in table 4 to this subpart, item 4.

(vii) If you are complying with the vapor balancing work practice standard for transfer racks according to table 4 to this subpart, item 3.a, include a statement to that effect and a statement that the pressure vent settings on the affected storage tanks are greater than or equal to 2.5 psig.

(viii) The information specified in § 63.2386(c)(10)(i), unless the information has already been submitted with the first Compliance report. If the information specified in § 63.2386(c)(10)(i) has already been submitted with the first Compliance report, the information specified in § 63.2386(d)(3) and (4), as applicable, shall be submitted instead.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2386 What reports must I submit and when and what information is to be submitted in each?

(a) You must submit each report in subpart SS of this part, Table 11 to this subpart, table 12 to this subpart, and in paragraphs (c) through (e) of this section that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report according to table 11 to this subpart and by the dates shown in paragraphs (b)(1) through (3) of this section, by the dates shown in subpart SS of this part, and by the dates shown in table 12 to this subpart, whichever are applicable.

(1)(i) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.2342 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your affected source in § 63.2342.

(ii) The first Compliance report must be postmarked no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.2342.

(2)(i) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(ii) Each subsequent Compliance report must be postmarked no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(3) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) and (2) of this section.

(c) *First Compliance report.* The first Compliance report must contain the information specified in paragraphs (c)(1) through (10) of this section.

(1) Company name and address.

(2) Statement by a responsible official, including the official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

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

(4) Any changes to the information listed in § 63.2382(d)(2) that have occurred since the submittal of the Notification of Compliance Status.

(5) If you had a SSM during the reporting period and you took actions consistent with your SSM plan, the Compliance report must include the information described in § 63.10(d)(5)(i).

(6) If there are no deviations from any emission limitation or operating limit that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations, operating limits, or work practice standards during the reporting period.

(7) If there were no periods during which the CMS was out of control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out of control during the reporting period.

(8) For closed vent systems and control devices used to control emissions, the information specified in paragraphs (c)(8)(i) and (ii) of this section for those planned routine maintenance activities that would require the control device to not meet the applicable emission limit.

(i) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description must include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(ii) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description must include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the applicable emission limit due to planned routine maintenance.

(9) A listing of all transport vehicles into which organic liquids were loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, during the previous 6 months for which vapor tightness documentation as required in § 63.2390(c) was not on file at the facility.

(10)(i) A listing of all transfer racks (except those racks at which only unloading of organic liquids occurs) and of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that are part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart.

(ii) If the information specified in paragraph (c)(10)(i) of this section has already been submitted with the Notification of Compliance Status, the information specified in paragraphs (d)(3) and (4) of this section, as applicable, shall be submitted instead.

(d) *Subsequent Compliance reports* . Subsequent Compliance reports must contain the information in paragraphs (c)(1) through (9) of this section and, where applicable, the information in paragraphs (d)(1) through (4) of this section.

(1) For each deviation from an emission limitation occurring at an affected source where you are using a CMS to comply with an emission limitation in this subpart, you must include in the Compliance report the applicable information in paragraphs (d)(1)(i) through (xii) of this section. This includes periods of SSM.

(i) The date and time that each malfunction started and stopped.

(ii) The dates and times that each CMS was inoperative, except for zero (low-level) and high-level checks.

(iii) For each CMS that was out of control, the information in § 63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of SSM, or during another period.

(v) A summary of the total duration of the deviations during the reporting period, and the total duration as a percentage of the total emission source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percentage of the total emission source operating time during that reporting period.

(viii) An identification of each organic HAP that was potentially emitted during each deviation based on the known organic HAP contained in the liquid(s).

(ix) A brief description of the emission source(s) at which the CMS deviation(s) occurred.

(x) A brief description of each CMS that was out of control during the period.

(xi) The date of the latest certification or audit for each CMS.

(xii) A brief description of any changes in CMS, processes, or controls since the last reporting period.

(2) Include in the Compliance report the information in paragraphs (d)(2)(i) through (iii) of this section, as applicable.

(i) For each storage tank and transfer rack subject to control requirements, include periods of planned routine maintenance during which the control device did not comply with the applicable emission limits in table 2 to this subpart.

(ii) For each storage tank controlled with a floating roof, include a copy of the inspection record (required in § 63.1065(b)) when inspection failures occur.

(iii) If you elect to use an extension for a floating roof inspection in accordance with § 63.1063(c)(2)(iv)(B) or (e)(2), include the documentation required by those paragraphs.

(3)(i) A listing of any storage tank that became subject to controls based on the criteria for control specified in table 2 to this subpart, items 1 through 6, since the filing of the last Compliance report.

(ii) A listing of any transfer rack that became subject to controls based on the criteria for control specified in table 2 to this subpart, items 7 through 10, since the filing of the last Compliance report.

(4)(i) A listing of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(ii) A listing of all transfer racks (except those racks at which only the unloading of organic liquids occurs) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(e) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to table 11 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission limitation in this subpart, we will consider submission of the Compliance report as satisfying any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report will not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the applicable title V permitting authority.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2390 What records must I keep?

(a) For each emission source identified in § 63.2338 that does not require control under this subpart, you must keep all records identified in § 63.2343.

(b) For each emission source identified in § 63.2338 that does require control under this subpart:

(1) You must keep all records identified in subpart SS of this part and in table 12 to this subpart that are applicable, including records related to notifications and reports, SSM, performance tests, CMS, and performance evaluation plans; and

(2) You must keep the records required to show continuous compliance, as required in subpart SS of this part and in tables 8 through 10 to this subpart, with each emission limitation, operating limit, and work practice standard that applies to you.

(c) For each transport vehicle into which organic liquids are loaded at a transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, you must keep the applicable records in paragraphs (c)(1) and (2) of this section or alternatively the verification records in paragraph (c)(3) of this section.

(1) For transport vehicles equipped with vapor collection equipment, the documentation described in 40 CFR 60.505(b), except that the test title is: Transport Vehicle Pressure Test-EPA Reference Method 27.

(2) For transport vehicles without vapor collection equipment, current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

(3) In lieu of keeping the records specified in paragraph (c)(1) or (2) of this section, as applicable, the owner or operator shall record that the verification of U.S. DOT tank certification or Method 27 of appendix A to 40 CFR part 60 testing, required in table 5 to this subpart, item 2, has been performed. Various methods for the record of verification can be used, such as: A check-off on a log sheet, a list of U.S. DOT serial numbers or Method 27 data, or a position description for gate security showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.

(d) You must keep records of the total actual annual facility-level organic liquid loading volume as defined in § 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in table 2 to this subpart, items 7 through 10.

(e) An owner or operator who elects to comply with § 63.2346(a)(4) shall keep the records specified in paragraphs (e)(1) through (3) of this section.

(1) A record of the U.S. DOT certification required by § 63.2346(a)(4)(ii).

(2) A record of the pressure relief vent setting specified in § 63.2346(a)(4)(v).

(3) If complying with § 63.2346(a)(4)(vi)(B), keep the records specified in paragraphs (e)(3)(i) and (ii) of this section.

(i) A record of the equipment to be used and the procedures to be followed when reloading the cargo tank or tank car and displacing vapors to the storage tank from which the liquid originates.

(ii) A record of each time the vapor balancing system is used to comply with § 63.2346(a)(4)(vi)(B).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006; 73 FR 40982, July 17, 2008]

§ 63.2394 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form at a separate location.

(b) As specified in § 63.10(b)(1), you must keep your files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You may keep the records off site for the remaining 3 years.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

Other Requirements and Information

§ 63.2396 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

(a) *Compliance with other regulations for storage tanks* . (1) After the compliance dates specified in § 63.2342, you are in compliance with the provisions of this subpart for any storage tank that is assigned to the OLD affected source and that is both controlled with a floating roof and is in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that records shall be kept for 5 years rather than 2 years for storage tanks that are assigned to the OLD affected source.

(2) After the compliance dates specified in § 63.2342, you are in compliance with the provisions of this subpart for any storage tank with a fixed roof that is assigned to the OLD affected source and that is both controlled with a closed vent system and control device and is in compliance with either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart.

(3) As an alternative to paragraphs (a)(1) and (2) of this section, if a storage tank assigned to the OLD affected source is subject to control under 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, you may elect to comply only with the requirements of this subpart for storage tanks meeting the applicability criteria for control in table 2 to this subpart.

(b) *Compliance with other regulations for transfer racks* . After the compliance dates specified in § 63.2342, if you have a transfer rack that is subject to 40 CFR part 61, subpart BB, and that transfer rack is in OLD operation, you must meet all of the requirements of this subpart for that transfer rack when the transfer rack is in OLD operation during the loading of organic liquids.

(c) *Compliance with other regulations for equipment leak components.* (1) After the compliance dates specified in § 63.2342, if you have pumps, valves, or sampling connections that are subject to a 40 CFR part 60 subpart, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you must comply with the provisions of each subpart for those equipment leak components.

(2) After the compliance dates specified in § 63.2342, if you have pumps, valves, or sampling connections subject to 40 CFR part 63, subpart GGG, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you may elect to comply with the provisions of this subpart for all such equipment leak components. You must identify in the Notification of Compliance Status required by § 63.2382(b) the provisions with which you will comply.

(d) [Reserved]

(e) *Overlap with other regulations for monitoring, recordkeeping, and reporting* —(1) *Control devices* . After the compliance dates specified in § 63.2342, if any control device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements of another 40 CFR part 63 subpart, the owner or operator must be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart EEEE. If complying with the monitoring, recordkeeping, and reporting requirements of the other subpart satisfies the monitoring, recordkeeping, and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the monitoring, recordkeeping, and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by § 63.2382(b).

(2) *Equipment leak components* . After the compliance dates specified in § 63.2342, if you are applying the applicable recordkeeping and reporting requirements of another 40 CFR part 63 subpart to the valves, pumps, and sampling connection systems associated with a transfer rack subject to this subpart that only unloads organic liquids directly to or via pipeline to a non-tank process unit component or to a storage tank subject to the other 40 CFR part 63 subpart, the owner or operator must be in compliance with the recordkeeping and reporting requirements of this subpart EEEE. If complying with the recordkeeping and reporting requirements of the other subpart satisfies the recordkeeping and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the recordkeeping and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the recordkeeping and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by § 63.2382(b).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

§ 63.2398 What parts of the General Provisions apply to me?

Table 12 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.2402 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (U.S. EPA) or a delegated authority such as your State, local, or eligible tribal agency. If the EPA Administrator has delegated authority to your State, local, or eligible tribal agency, then that agency, as well as the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office (see list in § 63.13) to find out if this subpart is delegated to your State, local, or eligible tribal agency.

(b) In delegating implementation and enforcement authority for this subpart to a State, local, or eligible tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not delegated to the State, local, or eligible tribal agency.

(1) Approval of alternatives to the nonopacity emission limitations, operating limits, and work practice standards in § 63.2346(a) through (c) under § 63.6(g).

(2) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

§ 63.2406 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in § 63.2, 40 CFR part 63, subparts H, PP, SS, TT, UU, and WW, and in this section. If the same term is defined in another subpart and in this section, it will have the meaning given in this section for purposes of this subpart. Notwithstanding the introductory language in § 63.921, the terms “container” and “safety device” shall have the meaning found in this subpart and not in § 63.921.

Actual annual average temperature, for organic liquids, means the temperature determined using the following methods:

(1) For heated or cooled storage tanks, use the calculated annual average temperature of the stored organic liquid as determined from a design analysis of the storage tank.

(2) For ambient temperature storage tanks:

(i) Use the annual average of the local (nearest) normal daily mean temperatures reported by the National Climatic Data Center; or

(ii) Use any other method that the EPA approves.

Annual average true vapor pressure means the equilibrium partial pressure exerted by the total table 1 organic HAP in the stored or transferred organic liquid. For the purpose of determining if a liquid meets the definition of an organic liquid, the vapor pressure is determined using standard conditions of 77 degrees F and 29.92 inches of mercury. For the purpose of determining whether an organic liquid meets the applicability criteria in table 2, items 1 through 6, to this subpart, use the actual annual average temperature as defined in this subpart. The vapor pressure value in either of these cases is determined:

(1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss from External Floating-Roof Tanks (incorporated by reference, see § 63.14);

(2) Using standard reference texts;

(3) By the American Society for Testing and Materials Method D2879-83, 96 (incorporated by reference, see § 63.14); or

(4) Using any other method that the EPA approves.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further processing downstream.

Cargo tank means a liquid-carrying tank permanently attached and forming an integral part of a motor vehicle or truck trailer. This term also refers to the entire cargo tank motor vehicle or trailer. For the purpose of this subpart, vacuum trucks used exclusively for maintenance or spill response are not considered cargo tanks.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapors from an emission point to a control device. This system does not include the vapor collection system that is part of some transport vehicles or the loading arm or hose that is used for vapor return. For transfer racks, the closed vent system begins at, and includes, the first block valve on the downstream side of the loading arm or hose used to convey displaced vapors.

Combustion device means an individual unit of equipment, such as a flare, oxidizer, catalytic oxidizer, process heater, or boiler, used for the combustion of organic emissions.

Container means a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include, but are not limited to, drums and portable cargo containers known as “portable tanks” or “totes.”

Control device means any combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart. Such equipment or devices include, but are not limited to, absorbers, adsorbers, condensers, and combustion devices. Primary condensers, steam strippers, and fuel gas systems are not considered control devices.

Crude oil means any of the naturally occurring liquids commonly referred to as crude oil, regardless of specific physical properties. Only those crude oils downstream of the first point of custody transfer after the production field are considered crude oils in this subpart.

Custody transfer means the transfer of hydrocarbon liquids after processing and/or treatment in the producing operations, or from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

Design evaluation means a procedure for evaluating control devices that complies with the requirements in § 63.985(b)(1)(i).

Deviation means any instance in which an affected source subject to this subpart, or portion thereof, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart, and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during SSM.

Emission limitation means an emission limit, opacity limit, operating limit, or visible emission limit.

Equipment leak component means each pump, valve, and sampling connection system used in organic liquids service at an OLD operation. Valve types include control, globe, gate, plug, and ball. Relief and check valves are excluded.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals (4.0 pounds per square inch absolute (psia)) or greater which is used as a fuel for internal combustion engines. Aviation gasoline is included in this definition.

High throughput transfer rack means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) a total of 11.8 million liters per year or greater of organic liquids.

In organic liquids service means that an equipment leak component contains or contacts organic liquids having 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart.

Low throughput transfer rack means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) less than 11.8 million liters per year of organic liquids.

On-site or *on site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source to which the records pertain, storage in central files elsewhere at the major source, or electronically available at the site.

Organic liquid means:

(1) Any non-crude oil liquid or liquid mixture that contains 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart, as determined using the procedures specified in § 63.2354(c).

(2) Any crude oils downstream of the first point of custody transfer.

(3) Organic liquids for purposes of this subpart do not include the following liquids:

(i) Gasoline (including aviation gasoline), kerosene (No. 1 distillate oil), diesel (No. 2 distillate oil), asphalt, and heavier distillate oils and fuel oils;

(ii) Any fuel consumed or dispensed on the plant site directly to users (such as fuels for fleet refueling or for refueling marine vessels that support the operation of the plant);

(iii) Hazardous waste;

(iv) Wastewater;

(v) Ballast water: or

(vi) Any non-crude oil liquid with an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia).

Organic liquids distribution (OLD) operation means the combination of activities and equipment used to store or transfer organic liquids into, out of, or within a plant site regardless of the specific activity being performed. Activities include, but are not limited to, storage, transfer, blending, compounding, and packaging.

Permitting authority means one of the following:

(1) The State Air Pollution Control Agency, local agency, or other agency authorized by the EPA Administrator to carry out a permit program under 40 CFR part 70; or

(2) The EPA Administrator, in the case of EPA-implemented permit programs under title V of the CAA (42 U.S.C. 7661) and 40 CFR part 71.

Plant site means all contiguous or adjoining surface property that is under common control, including surface properties that are separated only by a road or other public right-of-way. Common control includes surface properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination.

Research and development facility means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and which are not engaged in the manufacture of products for commercial sale, except in a *de minimis* manner.

Responsible official means responsible official as defined in 40 CFR 70.2 and 40 CFR 71.2, as applicable.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device that functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event.

Shutdown means the cessation of operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), including equipment required or used to comply with this subpart, or the emptying and degassing of a storage tank. Shutdown as defined here includes, but is not limited to, events that result from periodic maintenance, replacement of equipment, or repair.

Startup means the setting in operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), for any purpose. Startup also includes the placing in operation of any individual piece of equipment required or used to comply with this subpart including, but not limited to, control devices and monitors.

Storage tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, or reinforced plastic) that provide structural support and is designed to hold a bulk quantity of liquid. Storage tanks do not include:

(1) Units permanently attached to conveyances such as trucks, trailers, rail cars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Bottoms receivers;

(4) Surge control vessels;

(5) Vessels storing wastewater; or

(6) Reactor vessels associated with a manufacturing process unit.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within chemical manufacturing processes when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

Tank car means a car designed to carry liquid freight by rail, and including a permanently attached tank.

Total actual annual facility-level organic liquid loading volume means the total facility-level actual volume of organic liquid loaded for transport within or out of the facility through transfer racks that are part of the affected source into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) based on a 3-year rolling average, calculated annually.

(1) For existing affected sources, each 3-year rolling average is based on actual facility-level loading volume during each calendar year (January 1 through December 31) in the 3-year period. For calendar year 2004 only (the first year of the initial 3-year rolling average), if an owner or operator of an affected source does not have actual loading volume data for the time period from January 1, 2004, through February 2, 2004 (the time period prior to the effective date of the OLD NESHAP), the owner or operator shall compute a facility-level loading volume for this time period as follows: At the end of the 2004 calendar year, the owner or operator shall calculate a daily average facility-level loading volume (based on the actual loading volume for February 3, 2004, through December 31, 2004) and use that daily average to estimate the facility-level loading volume for the period of time from January 1, 2004, through February 2, 2004. The owner or operator shall then sum the estimated facility-level loading volume from January 1, 2004, through February 2, 2004, and the actual facility-level loading volume from February 3, 2004, through December 31, 2004, to calculate the annual facility-level loading volume for calendar year 2004.

(2)(i) For new affected sources, the 3-year rolling average is calculated as an average of three 12-month periods. An owner or operator must select as the beginning calculation date with which to start the calculations as either the initial startup date of the new affected source or the first day of the calendar month following the month in which startup occurs. Once selected, the date with which the calculations begin cannot be changed.

(ii) The initial 3-year rolling average is based on the projected maximum facility-level annual loading volume for each of the 3 years following the selected beginning calculation date. The second 3-year rolling average is based on actual facility-level loading volume for the first year of operation plus a new projected maximum facility-level annual loading volume for second and third years following the selected beginning calculation date. The third 3-year rolling average is based on actual facility-level loading volume for the first 2 years of operation plus a new projected maximum annual facility-level loading volume for the third year following the beginning calculation date. Subsequent 3-year rolling averages are based on actual facility-level loading volume for each year in the 3-year rolling average.

Transfer rack means a single system used to load organic liquids into, or unload organic liquids out of, transport vehicles or containers. It includes all loading and unloading arms, pumps, meters, shutoff valves, relief valves, and other piping and equipment necessary for the transfer operation. Transfer equipment and operations that are physically separate (i.e., do not share common piping, valves, and other equipment) are considered to be separate transfer racks.

Transport vehicle means a cargo tank or tank car.

Vapor balancing system means:

(1) A piping system that collects organic HAP vapors displaced from transport vehicles or containers during loading and routes the collected vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. For containers, the piping system must route the displaced vapors directly to the appropriate storage tank or to another storage tank connected to a common header in order to qualify as a vapor balancing system; or

(2) A piping system that collects organic HAP vapors displaced from the loading of a storage tank and routes the collected vapors to the transport vehicle from which the storage tank is filled.

Vapor collection system means any equipment located at the source (i.e., at the OLD operation) that is not open to the atmosphere; that is composed of piping, connections, and, if necessary, flow-inducing devices; and that is used for:

(1) Containing and conveying vapors displaced during the loading of transport vehicles to a control device;

(2) Containing and directly conveying vapors displaced during the loading of containers; or

(3) Vapor balancing. This does not include any of the vapor collection equipment that is installed on the transport vehicle.

Vapor-tight transport vehicle means a transport vehicle that has been demonstrated to be vapor-tight. To be considered vapor-tight, a transport vehicle equipped with vapor collection equipment must undergo a pressure change of no more than 250 pascals (1 inch of water) within 5 minutes after it is pressurized to 4,500 pascals (18 inches of water). This capability must be demonstrated annually using the procedures specified in EPA Method 27 of 40 CFR part 60, appendix A. For all other transport vehicles, vapor tightness is demonstrated by performing the U.S. DOT pressure test procedures for tank cars and cargo tanks.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

Table 1 to Subpart EEEE of Part 63—Organic Hazardous Air Pollutants

You must use the organic HAP information listed in the following table to determine which of the liquids handled at your facility meet the HAP content criteria in the definition of Organic Liquid in § 63.2406.

Compound name	CAS No.[1]
2,4-D salts and esters	94-75-7
Acetaldehyde	75-07-0
Acetonitrile	75-05-8
Acetophenone	98-86-2
Acrolein	107-02-8
Acrylamide	79-06-1
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Allyl chloride	107-05-1
Aniline	62-53-3
Benzene	71-43-2
Biphenyl	92-52-4
Butadiene (1,3-)	106-99-0
Carbon tetrachloride	56-23-5
Chloroacetic acid	79-11-8
Chlorobenzene	108-90-7
2-Chloro-1,3-butadiene (Chloroprene)	126-99-8
Chloroform	67-66-3
m-Cresol	108-39-4
o-Cresol	95-48-7
p-Cresol	106-44-5
Cresols/cresylic acid	1319-77-3

Compound name	CAS No.[1]
Cumene	98-82-8
Dibenzofurans	132-64-9
Dibutylphthalate	84-74-2
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107-06-2
Dichloropropene (1,3-)	542-75-6
Diethanolamine	111-42-2
Diethyl aniline (N,N-)	121-69-7
Diethylene glycol monobutyl ether	112-34-5
Diethylene glycol monomethyl ether	111-77-3
Diethyl sulfate	64-67-5
Dimethyl formamide	68-12-2
Dimethylhydrazine (1,1-)	57-14-7
Dioxane (1,4-) (1,4-Diethyleneoxide)	123-91-1
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8
Epoxybutane (1,2-)	106-88-7
Ethyl acrylate	140-88-5
Ethylbenzene	100-41-4
Ethyl chloride (Chloroethane)	75-00-3
Ethylene dibromide (Dibromomethane)	106-93-4
Ethylene glycol	107-21-1
Ethylene glycol dimethyl ether	110-71-4
Ethylene glycol monomethyl ether	109-86-4
Ethylene glycol monomethyl ether acetate	110-49-6
Ethylene glycol monophenyl ether	122-99-6
Ethylene oxide	75-21-8
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Hexachloroethane	67-72-1
Hexane	110-54-3
Hydroquinone	123-31-9
Isophorone	78-59-1
Maleic anhydride	108-31-6
Methanol	67-56-1
Methyl chloride (Chloromethane)	74-87-3
Methylene chloride (Dichloromethane)	75-09-2
Methylenedianiline (4,4′-)	101-77-9
Methylene diphenyl diisocyanate	101-68-8
Methyl hydrazine	60-34-4
Methyl isobutyl ketone (Hexone) (MIBK)	108-10-1
Methyl methacrylate	80-62-6
Methyl tert-butyl ether (MTBE)	1634-04-4
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Phenol	108-9-52

Compound name	CAS No.[1]
Phthalic anhydride	85-44-9
Polycyclic organic matter	50-32-8
Propionaldehyde	123-38-6
Propylene dichloride (1,2-Dichloropropane)	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Styrene	100-42-5
Styrene oxide	96-09-3
Tetrachloroethane (1,1,2,2-)	79-34-5
Tetrachloroethylene (Perchloroethylene)	127-18-4
Toluene	108-88-3
Toluene diisocyanate (2,4-)	584-84-9
o-Toluidine	95-53-4
Trichlorobenzene (1,2,4-)	120-82-1
Trichloroethane (1,1,1-) (Methyl chloroform)	71-55-6
Trichloroethane (1,1,2-) (Vinyl trichloride)	79-00-5
Trichloroethylene	79-01-6
Triethylamine	121-44-8
Trimethylpentane (2,2,4-)	540-84-1
Vinyl acetate	108-05-4
Vinyl chloride (Chloroethylene)	75-01-4
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4
Xylene (m-)	108-38-3
Xylene (o-)	95-47-6
Xylene (p-)	106-42-3
Xylenes (isomers and mixtures)	1330-20-7

[1] CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42913, July 28, 2006]

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 E

Part 70 Operating Permit No: T 089-29424-00345

[Downloaded from the eCFR on May 10, 2013]

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Source: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

What This Subpart Covers

§ 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

§ 63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP, except as specified in § 63.7491. For purposes of this subpart, a major source of HAP is as defined in § 63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in § 63.7575.

[78 FR 7162, Jan. 31, 2013]

§ 63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in § 63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

§ 63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see § 63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in § 63.1200(b) is not covered by Subpart EEE.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7491 was amended by revising paragraph (n). However, there is no paragraph (n) to revise.

§ 63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by January 31, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart on the effective date of the switch from waste to fuel.

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in § 63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7495 was amended by adding paragraph (e). However, there is already a paragraph (e).

Emission Limitations and Work Practice Standards

§ 63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in § 63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate steam. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate electricity. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (a)(1)(iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction after December 23, 2011 and before January 31, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.

In response to an action to enforce the standards set forth in § 63.7500 you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) *Assertion of affirmative defense.* To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(ii) Could not have been prevented through careful planning, proper design, or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when a violation occurred; and

(3) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(b) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in § 63.7500 of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[78 FR 7163, Jan. 31, 2013]

General Compliance Requirements

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits (including the use of CPMS), or with a CEMS, or COMS, you must develop a site-

specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013]

Testing, Fuel Analyses, and Initial Compliance Requirements

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to § 63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame

stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to § 63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to § 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 12, or 11 through 13 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with § 63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section.

(f) For new or reconstructed affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7540(a) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7540(a).

(h) For affected sources (as defined in § 63.7490) that ceased burning solid waste consistent with § 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective

date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2013, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in § 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in § 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in § 63.7495.

[78 FR 7164, Jan. 31, 2013]

§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance

level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra low sulfur liquid fuel, you do not need to conduct further performance tests if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in § 63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in § 63.7510(a).

[78 FR 7165, Jan. 31, 2013]

§ 63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in § 63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section and Table 6 to this subpart.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in § 63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling

mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing. For monthly sampling, each composite sample shall be collected at approximately equal 10-day intervals during the month.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop and submit a site-specific fuel analysis plan for other gas 1 fuels to the EPA Administrator for review and approval according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(h) You must obtain a single fuel sample for each fuel type according to the sampling procedures listed in Table 6 for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013]

§ 63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of § 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not

more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on January 31, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on January 31, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are operating following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n}(Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq. 1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n}(Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n}(Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n}(Er \times Sm \times Cfi) \div \sum_{i=1}^{n}(Sm \times Cfi) \quad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in § 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual steam generation for the month if you are complying with the emission limits on a electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to § 63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to § 63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n}(Er \times Sa \times Cfi) \div \sum_{i=1}^{n}(Sa \times Cfi) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) The Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategories, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n}(ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu), parts per million (ppm), or nanograms per dry standard cubic meter (ng/dscm).

ELi = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu, ppm or ng/dscm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013]

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen according to the procedures in paragraphs (a)(1) through (7) of this section.

(1) Install the CO CEMS and oxygen analyzer by the compliance date specified in § 63.7495. The CO and oxygen levels shall be monitored at the same location at the outlet of the boiler or process heater.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, the site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with § 63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Complete a minimum of one cycle of CO and oxygen CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen data concurrently. Collect at least four CO and oxygen CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to PM concentrations of no greater than 0.5 milligram per actual cubic meter.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.* , PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.* , check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you use an SO_2 CEMS, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013]

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2)(i). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{X} = \frac{1}{n}\sum_{i=1}^{n} X_i \; ; \; \bar{Y} = \frac{1}{n}\sum_{i=1}^{n} Y_i \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75L}{R} \qquad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_i \qquad \text{(Eq. 13)}$$

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 720 operating hours.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers ("back half") of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run. (iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iii) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(iv) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(v) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(vii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(viii) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in § 63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \qquad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} (Hgi90 \times Qi) \qquad \text{(Eq. 17)}$$

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.

$$Metals = \sum_{i=1}^{n} (TSM90i \times Qi) \qquad \text{(Eq. 18)}$$

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.

$$E_{adj} = E_m \times (1 - ECredits) \quad (Eq.\ 20)$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013]

Continuous Compliance Requirements

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013]

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in § 63.7550(c), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 12 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 12 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in § 63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 13 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 13 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is operating.

(iii) Keep records of CO levels according to § 63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in § 63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of § 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of § 63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 14 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 14 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new boiler or process heater operating hour.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the

CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11— Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in § 63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in § 63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in § 63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in § 63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to item 5 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013]

§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

Notification, Reports, and Records

§ 63.7545 What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in § 63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility complies with the required initial tune-up according to the procedures in § 63.7540(a)(10)(i) through (vi)."

(ii) "This facility has had an energy assessment performed according to § 63.7530(e)."

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit."

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013]

§ 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on July 31 or January 31, whichever date is the first date that occurs at least 180 days (or 1, 2, or 5 years, as applicable, if submitting an annual, biennial, or 5-year compliance report) after the compliance date that is specified for your source in § 63.7495.

(2) The first compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to a the requirements of a tune up they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv) and (xiv) of this section.

(2) If a facility is complying with the fuel analysis they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv), (vi), (x), (xi), (xiii), (xv) and paragraph (d) of this section.

(3) If a facility is complying with the applicable emissions limit with performance testing they must submit a compliance report with the information in (c)(5)(i) through (iv), (vi), (vii), (ix), (xi), (xiii), (xv) and paragraph (d) of this section.

(4) If a facility is complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (vi), (xi), (xiii), (xv) through (xvii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

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

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with § 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 12 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 13 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 14 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of § 63.7530 or the maximum mercury input operating limit using Equation 8 of § 63.7530, or the maximum TSM input operating limit using Equation 9 of § 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§ 63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§ 63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values based on the daily CEMS (CO and mercury) and CPMS (PM CPMS output, scrubber pH, scrubber liquid flow rate, scrubber pressure drop) data.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit or operating limit from which you deviated.

(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (defined in § 63.2) as required by this subpart you must submit the results of the performance tests, including any associated fuel analyses, required by this subpart and the compliance reports required in § 63.7550(b) to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the Administrator, you must also submit these reports, including the confidential business information, to the Administrator in the format specified by the Administrator. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test in paper submissions to the Administrator.

(2) Within 60 days after the date of completing each CEMS performance evaluation test (defined in 63.2) you must submit the relative accuracy test audit (RATA) data to the EPA's Central Data Exchange by using CEDRI as mentioned in paragraph (h)(1) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator shall submit the results of the performance evaluation in paper submissions to the Administrator.

(3) You must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report you must submit the report to the Administrator at the appropriate address listed in § 63.13. At the discretion of the Administrator, you must also submit these reports, to the Administrator in the format specified by the Administrator.

[78 FR 7183, Jan. 31, 2013]

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in § 63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(4) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 12 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 13 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(6) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable

emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(7) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(8) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(9) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 14 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(10) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(11) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

(i) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(j) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013]

§ 63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

§ 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g).

(2) Approval of alternative opacity emission limits in § 63.7500(a) under § 63.6(h)(9).

(3) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(4) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under § 63.7500(a)(2) and § 63.7522(g)(2).

(5) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

[76 FR 15664, Mar. 21, 2011 as amended at 78 FR 7186, Jan. 31, 2013]

§ 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.,* baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see § 63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of "coal" includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

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

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation. (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be "capable of combusting" fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU

that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an "as received" basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, vegetable oil, and comparable fuels as defined under 40 CFR 261.38.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

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

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* § 63.14(b)).

Responsible official means responsible official as defined in § 70.2.

Secondary material means the material as defined in § 241.2 of this chapter.

Shutdown means the cessation of operation of a boiler or process heater for any purpose. Shutdown begins either when none of the steam from the boiler is supplied for heating and/or producing electricity, or for any other purpose, or at the point of no fuel being fired in the boiler or process heater, whichever is earlier. Shutdown ends when there is no steam and no heat being supplied and no fuel being fired in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying steam or heat for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam or heat from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be calculated using Equations 21 through 25 of this section, as appropriate:

(i) For emission limits for boilers in the unit designed to burn solid fuel subcategory use Equation 21 of this section:

$$EL_{OBE} = EL_T \times 12.7\ MMBtu/Mwh \quad (Eq.\ 21)$$

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:

$$EL_{OBE} = EL_T \times 12.2\ MMBtu/Mwh \quad (Eq.\ 22)$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass use Equation 23 of this section:

$$EL_{OBE} = EL_T \times 13.9 \text{ MMBtu/Mwh} \quad \text{(Eq. 23)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iv) For emission limits for boilers in one of the subcategories of units designed to burn liquid fuels use Equation 24 of this section:

$$EL_{OBE} = EL_T \times 13.8 \text{ MMBtu/Mwh} \quad \text{(Eq. 24)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(v) For emission limits for boilers in the unit designed to burn gas 2 (other) subcategory, use Equation 25 of this section:

$$EL_{OBE} = EL_T \times 10.4 \text{ MMBtu/Mwh} \quad \text{(Eq. 25)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

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

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in § 241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (*e.g.,* materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, +41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, +44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium +32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, +49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.,* California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.,* Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07 [a]lb per MMBtu of heat input	8.7E-07 [a]lb per MMBtu of steam output or 1.1E-05 [a]lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04 [a]lb per MMBtu of steam output or 1.2E-03 [a]lb per MWh)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 [a]lb per MMBtu of heat input)	3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07 [a]lb per MMBtu of heat input	5.3E-07 [a]lb per MMBtu of steam output or 6.7E-06 [a]lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 lb per MMBtu of steam output or 1.1E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03 [a]lb per MMBtu of steam output or 1.6E-02 [a]lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before January 31, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

[78 FR 7193, Jan. 31, 2013]

Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh	For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E-06 lb per MMBtu of heat input	6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input)	1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb per MMBtu of steam output or 1.7E-02 lb per MWh)	Collect a minimum of 1 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,800 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	2.8 lb per MMBtu of steam output or 31 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06 lb per MMBtu of heat input	2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784 [b]collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b] collect a minimum of 2 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7195, Jan. 31, 2013]

Table 3 to Subpart DDDDD of Part 63—Work Practice Standards

As stated in § 63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.

2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575:
	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.
	f. A list of cost-effective energy conservation measures that are within the facility's control.
	g. A list of the energy savings potential of the energy conservation measures identified.
	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup	You must operate all CMS during startup. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, and liquefied petroleum gas.
	If you start firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, selective non-catalytic reduction (SNCR), and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose.
	You must comply with all applicable emission limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown	You must operate all CMS during shutdown. While firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR.
	You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

[78 FR 7198, Jan. 31, 2013]

Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters

As stated in § 63.7500, you must comply with the applicable operating limits:

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
1. Wet PM scrubber control on a boiler not using a PM CPMS	Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the most recent performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart.

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
2. Wet acid gas (HCl) scrubber control on a boiler not using a HCl CEMS	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on units not using a PM CPMS	a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); or
	b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.
4. Electrostatic precipitator control on units not using a PM CPMS	a. This option is for boilers and process heaters that operate dry control systems (i.e., an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average); or
	b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (i.e., COMS). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler not using a mercury CEMS	Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart.
6. Any other add-on air pollution control type on units not using a PM CPMS	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average).
7. Fuel analysis	Maintain the fuel type or fuel mixture such that the applicable emission rates calculated according to § 63.7530(c)(1), (2) and/or (3) is less than the applicable emission limits.
8. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test.
9. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O_2analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the most recent CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a).
10. SO_2CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO_2CEMS, maintain the 30-day rolling average SO_2emission rate at or below the highest hourly average SO_2concentration measured during the most recent HCl performance test, as specified in Table 8.

[78 FR 7199, Jan. 31, 2013]

Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant...	You must...	Using...
1. Filterable PM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the PM emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
2. TSM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the TSM emission concentration	Method 29 at 40 CFR part 60, appendix A-8 of this chapter
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter.

To conduct a performance test for the following pollutant...	You must...	Using...
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
4. Mercury	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the mercury emission concentration	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a]
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
5. CO	a. Select the sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine oxygen concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a]
	c. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	d. Measure the CO emission concentration	Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013]

Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or EPA 1631 or EPA 1631E or ASTM D6323 [a](for solid), or EPA 821-R-01-013 (for liquid or solid), or ASTM D4177 [a](for liquid), or ASTM D4057 [a](for liquid), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a](for biomass), or EPA 3050 [a](for solid fuel), or EPA 821-R-01-013 [a](for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a], ASTM E871 [a], or ASTM D5864 [a], or ASTM D240, or ASTM D95 [a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample	ASTM D6722 [a](for coal), EPA SW-846-7471B [a](for solid samples), or EPA SW-846-7470A [a](for liquid samples), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content	Equation 8 in § 63.7530.
	h. Calculate the mercury emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 12 in § 63.7530.
2. HCl	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M§[a](for coal), or ASTM D5198§[a](for biomass), or EPA 3050 [a]or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), ASTM D5864, ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a]or ASTM E871 [a], or D5864 [a], or ASTM D240 [a], or ASTM D95[a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels) or equivalent.
	f. Measure chlorine concentration in fuel sample	EPA SW-846-9250 [a], ASTM D6721 [a], ASTM D4208 [a](for coal), or EPA SW-846-5050 [a]or ASTM E776 [a](for solid fuel), or EPA SW-846-9056 [a]or SW-846-9076 [a](for solids or liquids) or equivalent.
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content	Equation 7 in § 63.7530.
	h. Calculate the HCl emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 11 in § 63.7530.
3. Mercury Fuel Specification for other gas 1 fuels	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter	Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954 [a], ASTM D6350 [a], ISO 6978-1:2003(E) [a], or ISO 6978-2:2003(E) [a], or EPA-1631 [a]or equivalent.

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784 [a]or equivalent.
4. TSM for solid fuels	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), or ASTM D4177 [a],(for liquid fuels)or ASTM D4057 [a](for liquid fuels),or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a]or TAPPI T266 [a](for biomass), or EPA 3050 [a]or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a]or ASTM E871 [a], or D5864, or ASTM D240 [a], or ASTM D95 [a](for liquid fuels), or ASTM D4006[a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample	ASTM D3683 [a], or ASTM D4606 [a], or ASTM D6357 [a]or EPA 200.8 [a]or EPA SW-846-6020 [a], or EPA SW-846-6020A [a], or EPA SW-846-6010C [a], EPA 7060 [a]or EPA 7060A [a](for arsenic only), or EPA SW-846-7740 [a](for selenium only).
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content	Equation 9 in § 63.7530.
	h. Calculate the TSM emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 13 in § 63.7530.

[a] Incorporated by reference, see § 63.14.

[78 FR 7201, Jan. 31, 2013]

Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
1. PM, TSM, or mercury	a. Wet scrubber operating parameters	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b)	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM or mercury performance test	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator operating parameters (option only for units that operate wet scrubbers)	i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b)	(1) Data from the voltage and secondary amperage monitors during the PM or mercury performance test	(a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests.
				(b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
2. HCl	a. Wet scrubber operating parameters	i. Establish site-specific minimum pressure drop, effluent pH, and flow rate operating limits according to § 63.7530(b)	(1) Data from the pressure drop, pH, and liquid flow-rate monitors and the HCl performance test	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
	b. Dry scrubber operating parameters	i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent	(1) Data from the sorbent injection rate monitors and HCl or mercury performance test	(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate.
	c. Alternative Maximum SO_2emission rate	i. Establish a site-specific maximum SO_2emission rate operating limit according to § 63.7530(b)	(1) Data from SO_2CEMS and the HCl performance test	(a) You must collect the SO_2emissions data according to § 63.7525(m) during the most recent HCl performance tests.
				(b) The maximum SO_2emission rate is equal to the lowest hourly average SO_2emission rate measured during the most recent HCl performance tests.
3. Mercury	a. Activated carbon injection	i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b)	(1) Data from the activated carbon rate monitors and mercury performance test	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
				(c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction (e.g., actual heat input divided by heat input during performance test, for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate.
4. Carbon monoxide	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to § 63.7520	(1) Data from the oxygen analyzer system specified in § 63.7525(a)	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average established during the performance test as your minimum operating limit.
5. Any pollutant for which compliance is demonstrated by a performance test	a. Boiler or process heater operating load	i. Establish a unit specific limit for maximum operating load according to § 63.7520(c)	(1) Data from the operating load monitors or from steam generation monitors	(a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test.
				(b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7203, Jan. 31, 2013]

Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
1. Opacity	a. Collecting the opacity monitoring system data according to § 63.7525(c) and § 63.7535; and
	b. Reducing the opacity monitoring data to 6-minute averages; and
	c. Maintaining opacity to less than or equal to 10 percent (daily block average).
2. PM CPMS	a. Collecting the PM CPMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4).
3. Fabric Filter Bag Leak Detection Operation	Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(9) are met.
4. Wet Scrubber Pressure Drop and Liquid Flow-rate	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.7530(b).
5. Wet Scrubber pH	a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to § 63.7530(b).
6. Dry Scrubber Sorbent or Carbon Injection Rate	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.7575.
7. Electrostatic Precipitator Total Secondary Electric Power Input	a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to § 63.7530(b).
8. Emission limits using fuel analysis	a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and
	b. Reduce the data to 12-month rolling averages; and
	c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 13 to this subpart.
9. Oxygen content	a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(2).
	b. Reducing the data to 30-day rolling averages; and

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
	c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the most recent CO performance test.
10. Boiler or process heater operating load	a. Collecting operating load data or steam generation data every 15 minutes.
	b. Maintaining the operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test according to § 63.7520(c).
11. SO_2emissions using SO_2CEMS	a. Collecting the SO_2CEMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average SO_2CEMS emission rate to a level at or below the minimum hourly SO_2rate measured during the most recent HCl performance test according to § 63.7530.

[78 FR 7204, Jan. 31, 2013]

Table 9 to Subpart DDDDD of Part 63—Reporting Requirements

As stated in § 63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in § 63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b).
	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	
	c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard during the reporting period, the report must contain the information in § 63.7550(d); and	
	d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e)	

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes. Additional terms defined in § 63.7575
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities and Circumvention	Yes.
§ 63.5	Preconstruction Review and Notification Requirements	Yes.
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.
§ 63.6(e)(1)(i)	General duty to minimize emissions.	No. See § 63.7500(a)(3) for the general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§ 63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§ 63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§ 63.6(g)	Use of alternative standards	Yes.
§ 63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See § 63.7500(a).
§ 63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	Yes.
§ 63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§ 63.6(j)	Presidential exemption.	Yes.
§ 63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.
§ 63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at § 63.7520(a) to (c).
§ 63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§ 63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.

Citation	Subject	Applies to subpart DDDDD
§ 63.8(c)(1)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See § 63.7500(a)(3).
§ 63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.
§ 63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§ 63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.
§ 63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§ 63.8(e)	Performance evaluation of a CMS	Yes.
§ 63.8(f)	Use of an alternative monitoring method.	Yes.
§ 63.8(g)	Reduction of monitoring data	Yes.
§ 63.9	Notification Requirements	Yes.
§ 63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§ 63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.
§ 63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(b)(2)(iii)	Maintenance records	Yes.
§ 63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§ 63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§ 63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.
§ 63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§ 63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.

Citation	Subject	Applies to subpart DDDDD
§ 63.10(d)(1) and (2)	General reporting requirements	Yes.
§ 63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§ 63.10(d)(4)	Progress reports under an extension of compliance	Yes.
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See § 63.7550(c)(11) for malfunction reporting requirements.
§ 63.10(e)	Additional reporting requirements for sources with CMS	Yes.
§ 63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§ 63.11	Control Device Requirements	No.
§ 63.12	State Authority and Delegation	Yes.
§ 63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§ 63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans

Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.3
1,2,3,7,8-pentachlorinated dibenzofuran	0.03
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1

Dioxin/furan congener	Toxic equivalency factor
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.0003

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7206, Jan. 31, 2013, Table 11 was added, effective Apr. 1, 2013. However Table 11 could not be added as a Table 11 is already in existence.

Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
1. Units in all subcategories designed to burn solid fuel	a. Mercury	3.5E-06 lb per MMBtu of heat input	For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis	a. Particulate Matter	0.008 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 1 dscm per run.
	b. Hydrogen Chloride	0.004 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis	a. Particulate Matter	0.0011 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 3 dscm per run.
	b. Hydrogen Chloride	0.0022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
4. Units designed to burn pulverized coal/solid fossil fuel	a. CO	90 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
5. Stokers designed to burn coal/solid fossil fuel	a. CO	7 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
6. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO	30 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
7. Stokers designed to burn biomass/bio-based solids	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.005 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO	260 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.02 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
9. Suspension burners/Dutch Ovens designed to burn biomass/bio-based solids	a. CO	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.2 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
10. Fuel cells designed to burn biomass/bio-based solids	a. CO	470 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
11. Hybrid suspension/grate units designed to burn biomass/bio-based solids	a. CO	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.2 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
12. Units designed to burn liquid fuel	a. Particulate Matter	0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 2 dscm per run.
	b. Hydrogen Chloride	0.0032 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	c. Mercury	3.0E-07 lb per MMBtu of heat input	For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	3 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
13. Units designed to burn liquid fuel located in non-continental States and territories	a. Particulate Matter	0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 2 dscm per run.
	b. Hydrogen Chloride	0.0032 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	7.8E-07 lb per MMBtu of heat input	For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	51 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
14. Units designed to burn gas 2 (other) gases	a. Particulate Matter	0.0067 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 1 dscm per run.
	b. Hydrogen Chloride	0.0017 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	d. CO	3 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.08 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.

[a] Incorporated by reference, see § 63.14.

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7208, Jan. 31, 2013, Table 12 was added, effective Apr. 1, 2013. However, Table 12 could not be added as a Table 12 is already in existence.

Table 13 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before January 31, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07 [a]lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
4. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
6. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
9. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
13. Units designed to burn liquid fuel	a. HCl	1.2E-03 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.9E-07 [a]lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
14. Units designed to burn heavy liquid fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
15. Units designed to burn light liquid fuel	a. CO (or CEMS)	130 [a]ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen, 1-day block average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
17. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7210, Jan. 31, 2013]

Attachment F

Part 70 Operating Permit No: T089-29424-00345

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Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Source: 51 FR 2701, Jan. 21, 1986, as amended at 63 FR 24444, May 4, 1998; 65 FR 61752, Oct. 17, 2000; 73 FR 78209, Dec. 22, 2008

§60.18 General control device and work practice requirements.

(a) *Introduction.* (1) This section contains requirements for control devices used to comply with applicable subparts of 40 CFR parts 60 and 61. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(2) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A-7, Method 21 monitor.

(b) *Flares.* Paragraphs (c) through (f) apply to flares.

(c)(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i)(A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max}, as determined by the following equation:

$V_{max} = (X_{H2} - K_1) * K_2$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.

X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in §60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4)(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f)(1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

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where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant}, \; 1.740 \times 10^{-7} \left(\frac{1}{ppm}\right) \left(\frac{g\ mole}{scm}\right) \left(\frac{MJ}{kcal}\right)$$

where the standard temperature for $\left(\frac{g\ mole}{scm}\right)$ is 20°C;

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C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in §60.17); and

H_i = Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in §60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, V_{max}, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$Log_{10} (V_{max})=(H_T+28.8)/31.7$

V_{max} = Maximum permitted velocity, M/sec

28.8=Constant

31.7=Constant

H_T = The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation.

$V_{max} = 8.706+0.7084 (H_T)$

V_{max} = Maximum permitted velocity, m/sec

8.706=Constant

0.7084=Constant

H_T = The net heating value as determined in paragraph (f)(3).

(g) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (g), (h), and (i) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, Appendix A-7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A-7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (g), (h), and (i) of this section apply to this standard. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (g)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (g), (h), and (i) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, or 65 that requires monitoring of equipment with a 40 CFR part 60, Appendix A-7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, Appendix A-7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, Appendix A-7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(h) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A-7, Method 21 monitor.

(1) An owner or operator of an affected source subject to CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (i) of this section instead of using the 40 CFR part 60, Appendix A-7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.

(2) Any leak detected when following the leak survey procedure in paragraph (i)(3) of this section must be identified for repair as required in the applicable subpart.

(3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60,

Appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.

(4) The schedule for repair is as required in the applicable subpart.

(5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.

(6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:

(i) Skip period leak detection and repair;

(ii) Quality improvement plans; or

(iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (h)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, Appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(i) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (i)(1) through (i)(5) of this section.

(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (i)(2)(i) of this section in accordance with the procedure specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (i)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (i)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^{k} x_i$$

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Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds}.

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate specified in paragraph (i)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under §60.13(i).

(3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and

are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (i)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (i)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subpart.

(5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV.*

Attachment G

Part 70 Operating Permit No: T 089-29424-00345

[Downloaded from the eCFR on May 22, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations

Source: 61 FR 34158, July 1, 1996, unless otherwise noted.

§ 63.680 Applicability and designation of affected sources.

(a) The provisions of this subpart apply to the owner and operator of a plant site for which both of the conditions specified in paragraphs (a)(1) and (a)(2) of this section are applicable. If either one of these conditions does not apply to the plant site, then the owner and operator of the plant site are not subject to the provisions of this subpart.

(1) The plant site is a major source of hazardous air pollutant (HAP) emissions as defined in 40 CFR 63.2.

(2) At the plant site is located one or more of operations that receives off-site materials as specified in paragraph (b) of this section and the operations is one of the following waste management operations or recovery operations as specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section.

(i) A waste management operation that receives off-site material and the operation is regulated as a hazardous waste treatment, storage, and disposal facility (TSDF) under either 40 CFR part 264 or part 265.

(ii) A waste management operation that treats wastewater which is an off-site material and the operation is exempted from regulation as a hazardous waste treatment, storage, and disposal facility under 40 CFR 264.1(g)(6) or 40 CFR 265.1(c)(10).

(iii) A waste management operation that treats wastewater which is an off-site material and the operation meets both of the following conditions:

(A) The operation is subject to regulation under either section 402 or 307(b) of the Clean Water Act but is not owned by a “state” or “municipality” as defined by section 502(3) and 502(4), respectively, of the Clean Water Act; and

(B) The treatment of wastewater received from off-site is the predominant activity performed at the plant site.

(iv) A recovery operation that recycles or reprocesses hazardous waste which is an off-site material and the operation is exempted from regulation as a hazardous waste treatment, disposal, and storage facility under 40 CFR 264.1(g)(2) or 40 CFR 265.1(c)(6).

(v) A recovery operation that recycles or reprocesses used solvent which is an off-site material and the operation is not part of a chemical, petroleum, or other manufacturing process that is required to use air emission controls by another subpart of 40 CFR part 63 or 40 CFR part 61.

(vi) A recovery operation that re-refines or reprocesses used oil which is an off-site material and the operation is regulated under 40 CFR 279 subpart F—Standards for Used Oil Processors and Refiners.

(b) For the purpose of implementing this subpart, an off-site material is a material that meets all of the criteria specified in paragraph (b)(1) of this section but is not one of the materials specified in paragraph (b)(2) of this section.

(1) An off-site material is a material that meets all of the criteria specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. If any one of these criteria do not apply to the material, then the material is not an off-site material subject to this subpart.

(i) The material is a waste, used oil, or used solvent as defined in § 63.681 of this subpart;

(ii) The waste, used oil, or used solvent is not produced or generated within the plant site, but the material is delivered, transferred, or otherwise moved to the plant site from a location outside the boundaries of the plant site; and

(iii) The waste, used oil, or used solvent contains one or more of the hazardous air pollutants (HAP) listed in Table 1 of this subpart based on the composition of the material at the point-of-delivery, as defined in § 63.681 of this subpart.

(2) For the purpose of implementing this subpart, the following materials are not off-site materials:

(i) Household waste as defined in 40 CFR 258.2.

(ii) Radioactive mixed waste managed in accordance with all applicable regulations under Atomic Energy Act and Nuclear Waste Policy Act authorities.

(iii) Waste that is generated as a result of implementing remedial activities required under the Resource Conservation and Recovery Act (RCRA) corrective action authorities (RCRA sections 3004(u), 3004(v), or 3008(h)), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authorities, or similar Federal or State authorities.

(iv) Waste containing HAP that is generated by residential households (e.g., old paint, home garden pesticides) and subsequently is collected as a community service by government agencies, businesses, or other organizations for the purpose of promoting the proper disposal of this waste.

(v) Waste that is transferred from a chemical manufacturing plant or other facility for which both of the following conditions apply to the waste:

(A) The management of the waste at the facility is required either under part 63 subpart F—National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry or under another subpart in 40 CFR part 63 to meet the air emission control standards for process wastewater specified in 40 CFR 63.132 through 63.147; and

(B) The owner or operator of the facility from which the waste is transferred has complied with the provisions of 40 CFR 63.132(g)(1)(ii) and (g)(2).

(vi) Waste that is transferred from a chemical manufacturing plant, petroleum refinery, or coke by-product recovery plant which is subject to 40 CFR part 61, subpart FF—National Emission Standards for Benzene Waste Operations, and for which both of the following conditions apply to the waste:

(A) The waste is generated at a facility that is not exempted under the provisions of 40 CFR 61.342(a) from meeting the air emission control standards of 40 CFR part 61, subpart FF; and

(B) The owner or operator of the facility from which the waste is transferred has complied with the provisions of 40 CFR 61.342(f)(2).

(vii) Ship ballast water pumped from a ship to an onshore wastewater treatment facility.

(viii) Hazardous waste that is stored for 10 days or less at a transfer facility in compliance with the provisions of 40 CFR 263.12.

(c) *Affected sources* —(1) *Off-site material management units.* For each operation specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that is located at the plant site, the affected source is the entire group of off-site material management units associated with the operation. An off-site material management unit is a tank, container, surface impoundment, oil-water separator, organic-water separator, or transfer system used to manage off-site material. For the purpose of implementing the standards under this subpart, a unit that meets the definition of a tank or container but also is equipped with a vent that serves as a process vent for any of the processes listed in paragraphs (c)(2)(i) through (c)(2)(vi) of this section is not an off-site material management unit but instead is a process vent and is to be included in the appropriate affected source group under paragraph (c)(2) of this section. Examples of such a unit may include, but are not limited to, a distillate receiver vessel, a primary condenser, a bottoms receiver vessel, a surge control tank, a separator tank, and a hot well.

(2) *Process vents.* For each operation specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that is located at the plant site, the affected source is the entire group of process equipment associated with the process vents for the processes listed in paragraphs (c)(2)(i) through (c)(2)(vi) of this section.

(i) Distillation process used for the treatment, recycling, or recovery of off-site material. Distillation means a process, either batch or continuous, separating one or more off-site material feed streams into two or more exit streams having different component concentrations from those in the feed stream or streams. The separation is achieved by the redistribution of the components between the liquid and vapor phases as they approach equilibrium within the distillation unit.

(ii) Fractionation process used for the treatment, recycling, or recovery of off-site material. Fractionation means a liquid mixture separation process or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

(iii) Thin-film evaporation process used for the treatment, recycling, or recovery of off-site material. Thin-film evaporation means a liquid mixture separation process or method that uses a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

(iv) Solvent extraction process used for the treatment, recycling, or recovery of off-site material. Solvent extraction means a separation process or method in which a solid or a solution is contacted with a liquid solvent (the material and the solvent being relatively insoluble in each other) to preferentially dissolve and transfer one or more components into the solvent.

(v) Steam stripping process used for the treatment, recycling, or recovery of off-site material. Steam stripping means a liquid mixture separation process or method in which vaporization of the volatile components of a liquid mixture occurs by the introduction of steam directly into the process.

(vi) Gas stripping process used for the treatment, recycling, or recovery of off-site material. Gas stripping means a desorption process or method used to transfer one or more volatile components from a liquid mixture into a gas stream either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are examples of the process configurations used for contacting the gas and a liquid.

(3) *Equipment leaks.* For each operation specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that is located at the plant site, the affected source is the entire group of equipment components for which each component meets all of the conditions specified in paragraphs (c)(3)(i) through (c)(3)(iii) of this section. If any one of these conditions do not apply to an equipment component, then that component is not part of the affected source for equipment leaks.

(i) The equipment component is a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, or instrumentation system;

(ii) The equipment component contains or contacts off-site material having a total HAP concentration equal to or greater than 10 percent by weight; and

(iii) The equipment component is intended to operate for 300 hours or more during a calendar year in off-site material service, as defined in § 63.681 of this subpart.

(d) *Facility-wide exemption.* The owner or operator of affected sources subject to this subpart is exempted from the requirements of §§ 63.682 through 63.699 of this subpart in situations when the total annual quantity of the HAP that is contained in the off-site material received at the plant site is less than 1 megagram per year. For a plant site to be exempted under the provisions of this paragraph (d), the owner or operator must meet the requirements in paragraphs (d)(1) through (d)(3) of this section.

(1) The owner or operator must prepare an initial determination of the total annual HAP quantity in the off-site material received at the plant site. This determination is based on the total quantity of the HAP listed in Table 1 of this subpart as determined at the point-of-delivery for each off-site material stream.

(2) The owner or operator must prepare a new determination whenever the extent of changes to the quantity or composition of the off-site material received at the plant site could cause the total annual HAP quantity in the off-site material received at the plant site to exceed the limit of 1 megagram per year.

(3) The owner or operator must maintain documentation to support the owner's or operator's determination of the total annual HAP quantity in the off-site material received at the plant site. This documentation must include the basis and data used for determining the HAP content of the off-site material.

(e) *Compliance dates* —(1) *Existing sources.* The owner or operator of an affected source that commenced construction or reconstruction before October 13, 1994, must achieve compliance with the provisions of this subpart on or before the date specified in paragraph (e)(1)(i) or (e)(1)(ii) of this section as applicable to the affected source.

(i) For an affected source that commenced construction or reconstruction before October 13, 1994 and receives off-site material for the first time before February 1, 2000, the owner or operator of this affected source must achieve compliance with the provisions of the subpart on or before February 1, 2000 unless an extension has been granted by the Administrator as provided in 40 CFR 63.6(i).

(ii) For an affected source that commenced construction or reconstruction before October 13, 1994, but receives off-site material for the first time on or after February 1, 2000, the owner or operator of the affected source must achieve compliance with the provisions of this subpart upon the first date that the affected source begins to manage off-site material.

(2) *New sources.* The owner or operator of an affected source for which construction or reconstruction commences on or after October 13, 1994, must achieve compliance with the provisions of this subpart on or before July 1, 1996, or upon initial startup of operations, whichever date is later as provided in 40 CFR 63.6(b).

(f) The provisions of 40 CFR part 63, subpart A—General Provisions that apply and those that do not apply to this subpart are specified in Table 2 of this subpart.

[61 FR 34158, July 1, 1996, as amended at 65 FR 38963, July 20, 1999]

§ 63.681 Definitions.

All terms used in this subpart shall have the meaning given to them in this section, 40 CFR 63.2 of this part, and the Act.

Boiler means an enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

Closed-vent system means a system that is not open to the atmosphere and is composed of hard-piping, ductwork, connections, and, if necessary, fans, blowers, or other flow-inducing devices that conveys gas or vapor from an emission point to a control device.

Closure device means a cap, hatch, lid, plug, seal, valve, or other type of fitting that prevents or reduces air pollutant emissions to the atmosphere by blocking an opening in a cover when the device is secured in the closed position. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

Container means a portable unit used to hold material. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes", cargo tank trucks, and tank rail cars.

Continuous record means documentation of data values measured at least once every 15 minutes and recorded at the frequency specified in this subpart.

Continuous recorder means a data recording device that either records an instantaneous data value at least once every 15 minutes or records 15-minutes or more frequent block averages.

Continuous seal means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

Control device means equipment used for recovering, removing, oxidizing, or destroying organic vapors. Examples of such equipment include but are not limited to carbon adsorbers, condensers, vapor incinerators, flares, boilers, and process heaters.

Cover means a device or system that provides a continuous barrier over the material managed in an off-site material management unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings needed for operation, inspection, sampling, maintenance, and repair of the unit provided that each opening is closed when not in use (e.g., access hatches, sampling ports). A cover may be a separate piece of equipment which can be detached and removed from the unit or a *cover* may be formed by structural features permanently integrated into the design of the unit.

Emission point means an individual tank, surface impoundment, container, oil-water or organic-water separator, transfer system, process vent, or enclosure.

Enclosure means a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapor through a closed vent system to a control device.

External floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a tank with no fixed roof.

Fixed roof means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the liquid managed in the unit.

Flame zone means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

Floating roof means a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the liquid being contained, and is equipped with a continuous seal.

Flow indicator means a device that indicates whether gas is flowing, or whether the valve position would allow gas to flow in a bypass line.

Hard-piping means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

Hazardous air pollutants or *HAP* means the specific organic chemical compounds, isomers, and mixtures listed in Table 1 of this subpart.

Hazardous waste means a waste that is determined to be hazardous under the Resource Conservation and Recovery Act (PL 94-580) (RCRA), as implemented by 40 CFR parts 260 and 261.

Individual drain system means a stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge or disposal. The term includes hard-piping, all drains and junction boxes, together with their associated sewer lines and other junction boxes (e.g., manholes, sumps, and lift stations) conveying wastewater streams or residuals. For the purpose of this subpart, an individual drain system is not a drain and collection system that is designed and operated for the sole purpose of collecting rainfall runoff (e.g., stormwater sewer system) and is segregated from all other individual drain systems.

Internal floating roof means a cover that rests or floats on the liquid surface (but not necessarily in complete contact with it inside a tank that has a fixed roof).

Light-material service means the container is used to manage an off-site material for which both of the following conditions apply: the vapor pressure of one or more of the organic constituents in the off-site material is greater than 0.3 kilopascals (kPa) at 20 °C; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight.

Liquid-mounted seal means a foam- or liquid-filled continuous seal mounted in contact with the liquid in a unit.

Maximum HAP vapor pressure means the sum of the individual HAP equilibrium partial pressure exerted by an off-site material at the temperature equal to either: the local maximum monthly average temperature as reported by the National Weather Service when the off-site material is stored or treated at ambient temperature; or the highest calendar-month average temperature of the off-site material when the off-site material is stored at temperatures above the ambient temperature or when the off-site material is stored or treated at temperatures below the ambient temperature. For the purpose of this subpart, maximum HAP vapor pressure is determined using the procedures specified in § 63.694(j) of this subpart.

Metallic shoe seal means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in § 63.694(k) of this subpart.

Off-site material means a material that meets all of the criteria specified in paragraph § 63.680(b)(1) of this subpart but is not one of the materials specified in § 63.680(b)(2) of this subpart.

Off-site material management unit means a tank, container, surface impoundment, oil-water separator, organic-water separator, or transfer system used to manage off-site material.

Off-site material service means any time when a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, or instrumentation system contains or contacts off-site material.

Off-site material stream means an off-site material produced or generated by a particular process or source such that the composition and form of the material comprising the stream remain consistent. An off-site material stream may be delivered, transferred, or otherwise moved to the plant site in a continuous flow of material (e.g., wastewater flowing through a pipeline) or in a series of discrete batches of material (e.g., a truckload of drums all containing the same off-site material or multiple bulk truck loads of an off-site material produced by the same process).

Oil-water separator means a separator as defined for this subpart that is used to separate oil from water.

Operating parameter value means a minimum or maximum value established for a control device or treatment process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation or standard.

Organic-water separator means a separator as defined for this subpart that is used to separate organics from water.

Plant site means all contiguous or adjoining property that is under common control including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof. A unit or group of units within a contiguous property that are not under common control (e.g., a wastewater treatment unit or solvent recovery unit located at the site but is sold to a different company) is a different plant site.

Point-of-delivery means the point at the boundary or within the plant site where the owner or operator first accepts custody, takes possession, or assumes responsibility for the management of an off-site material stream managed in a waste management operation or recovery operation specified in § 63.680 (a)(2)(i) through (a)(2)(vi) of this subpart. The characteristics of an off-site material stream are determined prior to combining the off-site material stream with other off-site material streams or with any other materials.

Point-of-treatment means a point after the treated material exits the treatment process but before the first point downstream of the treatment process exit where the organic constituents in the treated material have the potential to volatilize and be released to the atmosphere. For the purpose of applying this definition to this subpart, the first point downstream of the treatment process exit is not a fugitive emission point due to an equipment leak from any of the following equipment components: pumps, compressors, valves, connectors, instrumentation systems, or safety devices.

Process heater means an enclosed combustion device that transfers heat released by burning fuel directly to process streams or to heat transfer liquids other than water.

Process vent means an open-ended pipe, stack, or duct through which a gas stream containing HAP is continuously or intermittently discharged to the atmosphere from any of the processes listed in § 63.680(c)(2)(i) through (c)(2)(vi) of this section. For the purpose of this subpart, a process vent is none of the following: a pressure-relief vent or other vent that is used as a safety device (as defined in this section); an open-ended line or other vent that is subject to the equipment leak control requirements under § 63.691 of this subpart; or a stack or other vent that is used to exhaust combustion products from a boiler, furnace, process heater, incinerator, or other combustion device.

Recovery operation means the collection of off-site material management units, process vents, and equipment components used at a plant site to manage an off-site material stream from the point-of-delivery through the point where the material has been recycled, reprocessed, or re-refined to obtain the intended product or to remove the physical and chemical impurities of concern.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions to prevent physical damage or permanent deformation to equipment by venting gases or vapors during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

Separator means a waste management unit, generally a tank, used to separate oil or organics from water. A separator consists of not only the separation unit but also the forebay and other separator basins, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to any additional treatment units such as an air flotation unit clarifier or biological treatment unit. Examples of a separator include, but are not limited to, an API separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.

Single-seal system means a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

Surface impoundment means a unit that is a natural topographical depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquids. Examples of surface impoundments include holding, storage, settling, and aeration pits, ponds, and lagoons.

Tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support and is designed to hold an accumulation of liquids or other materials.

Transfer system means a stationary system for which the predominant function is to convey liquids or solid materials from one point to another point within a waste management operation or recovery operation. For the purpose of this subpart, the conveyance of material using a container (as defined for this subpart) or a self-propelled vehicle (e.g., a front-end loader) is not a transfer system. Examples of a transfer system include but are not limited to a pipeline, an individual drain system, a gravity-operated conveyor (such as a chute), and a mechanically-powered conveyor (such as a belt or screw conveyor).

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius (°C) or ±1.2 degrees °C, whichever value is greater.

Treatment process means a process in which an off-site material stream is physically, chemically, thermally, or biologically treated to destroy, degrade, or remove hazardous air pollutants contained in the off-site material. A treatment process can be composed of a single unit (e.g., a steam stripper) or a series of units (e.g., a wastewater treatment system). A treatment process can be used to treat one or more off-site material streams at the same time.

Used oil means any oil refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. This definition is the same definition of "used oil" in 40 CFR 279.1.

Used solvent means a mixture of aliphatic hydrocarbons or a mixture of one and two ring aromatic hydrocarbons that has been used as a solvent and as a result of such use is contaminated by physical or chemical impurities.

Vapor-mounted seal means a continuous seal that is mounted such that there is a vapor space between the liquid in the unit and the bottom of the seal.

Volatile organic hazardous air pollutant concentration or *VOHAP concentration* means the fraction by weight of those compounds listed in Table 1 of this subpart that are in an off-site material as measured using Method 305 in appendix A of this part and expressed in terms of parts per million (ppm). As an alternative to using Method 305, an owner or operator may determine the HAP concentration of an off-site material using any one of the other test methods specified in § 63.694(b)(2)(ii) of this subpart. When a test method specified in § 63.694(b)(2)(ii) of this subpart other than Method 305 is used to determine the speciated HAP concentration of an off-site material, the individual compound concentration may be adjusted by the corresponding f_{m305} value listed in Table 1 of this subpart to determine a VOHAP concentration.

Waste means a material generated from industrial, commercial, mining, or agricultural operations or from community activities that is discarded, discharged, or is being accumulated, stored, or physically, chemically, thermally, or biologically treated prior to being discarded or discharged.

Waste management operation means the collection of off-site material management units, process vents, and equipment components used at a plant site to manage an off-site material stream from the point-of-delivery to the point where the waste exits or is discharged from the plant site or the waste is placed for on-site disposal in a unit not subject to this subpart (e.g., a waste incinerator, a land disposal unit).

Waste stabilization process means any physical or chemical process used to either reduce the mobility of hazardous constituents in a waste or eliminate free liquids as determined by Test Method 9095—Paint Filter Liquids Test in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition,

September 1986, as amended by Update I, November 15, 1992. (As an alternative, an owner or operator may use any more recent, updated version of Method 9095 approved by the EPA.) A waste stabilization process includes mixing the waste with binders or other materials and curing the resulting waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification." A waste stabilization process does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38964, July 20, 1999]

§ 63.682 [Reserved]

§ 63.683 Standards: General.

(a) The general standards under this section apply to owners and operators of affected sources as designated in § 63.680(c) of this subpart.

(b) *Off-site material management units.* (1) For each off-site material management unit that is part of an affected source, the owner or operator must meet the requirements in either paragraph (b)(1)(i), (b)(1)(ii), or (b)(1)(iii) of this section except for those off-site material management units exempted under paragraph (b)(2) of this section.

(i) The owner or operator controls air emissions from the off-site material management unit in accordance with the applicable standards specified in §§ 63.685 through 63.689 of this subpart.

(ii) The owner or operator removes or destroys HAP in the off-site material before placing the material in the off-site material management unit by treating the material in accordance with the standards specified in § 63.684 of this subpart.

(iii) The owner or operator determines before placing off-site material in the off-site material management unit that the average VOHAP concentration of the off-site material is less than 500 parts per million by weight (ppmw) at the point-of-delivery. The owner or operator must perform an initial determination of the average VOHAP concentration of the off-site material using the procedures specified in § 63.694(b) of this subpart. This initial determination must be performed either before the first time any portion of the off-site material stream is placed in the unit or by the compliance date, whichever date is later. Thereafter, the owner or operator must review and update, as necessary, this determination at least once every calendar year following the date of the initial determination for the off-site material stream.

(2) An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section when the owner or operator meets one of the exemptions provided in paragraphs (b)(2)(i) through (b)(2)(iv) of this section as applicable to the unit.

(i) An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material management unit is also subject to another subpart under 40 CFR part 63 or 40 CFR part 61, and the owner or operator is controlling the HAP listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart under part 61 or part 63.

(ii) At the discretion of the owner or operator, one or a combination of off-site material management units may be exempted from the requirements in paragraph (b)(1) of this section when these units meet the condition that the total annual quantity of HAP contained in the off-site material placed in the units exempted under this paragraph (b)(2)(ii) is less than 1 megagram per year. For the off-site material management units selected by the owner or operator to be exempted from the requirements in paragraph (b)(1) of this section, the owner or operator must meet the requirements in paragraphs (b)(2)(ii)(A) and (b)(2)(ii)(B) of this section. An owner or operator may change the off-site material management units selected to be exempted under this paragraph (b)(2)(ii) by preparing a new designation for the exempt-units as required by paragraph (b)(2)(ii)(A) of this section and performing a new determination as required by paragraph (b)(2)(ii)(B) of this section.

(A) The owner or operator must designate each of the off-site material management units selected by the owner or operator to be exempt under paragraph (b)(2)(ii) of this section by either submitting to the Administrator a written notification identifying the exempt-units or permanently marking the exempt-units at the plant site. If an owner or

operator chooses to prepare and submit a written notification, this notification must include a site plan, process diagram, or other appropriate documentation identifying each of the exempt-units. If an owner or operator chooses to permanently mark the exempt-units, each exempt-unit must be marked in such a manner that it can be readily identified as an exempt-unit from the other off-site material management units located at the plant site.

(B) The owner or operator must prepare an initial determination of the total annual HAP quantity in the off-site material placed in the units exempted under this paragraph (b)(2)(ii). This determination is based on the total quantity of the HAP listed in Table 1 of this subpart as determined at the point where the off-site material is placed in each exempted unit. The owner or operator must perform a new determination whenever the extent of changes to the quantity or composition of the off-site material placed in the exempted units could cause the total annual HAP content in the off-site material to exceed 1 megagram per year. The owner or operator must maintain documentation to support the most recent determination of the total annual HAP quantity. This documentation must include the basis and data used for determining the HAP content of the off-site material.

(iii) A tank or surface impoundment is exempted from the requirements in paragraph (b)(1) of this section if the unit is used for a biological treatment process that meets the requirements in either paragraph (b)(2)(iii)(A) or (b)(2)(iii)(B) of this section and the owner or operator complies with the monitoring requirements in § 63.684(e)(4) of this subpart.

(A) The HAP biodegradation efficiency (R_{bio}) for the biological treatment process is equal to or greater than 95 percent. The HAP biodegradation efficiency (R_{bio}) shall be determined in accordance with the requirements of § 63.694(h) of this subpart.

(B) The total actual HAP mass removal rate (MR_{bio}) for the off-site material treated by the biological treatment process is equal to or greater than the required HAP mass removal rate (RMR) for the off-site material. The total actual HAP mass removal rate (MR_{bio}) must be determined in accordance with the requirements of § 63.694(i) of this subpart. The required HAP mass removal rate (RMR) must be determined in accordance with the requirements of § 63.694(e) of this subpart.

(iv) An off-site material management unit is exempted from the requirements in paragraph (b)(1) of this section if the off-site material placed in the unit is a hazardous waste that meets the conditions specified in either paragraph (b)(2)(iv)(A) or (b)(2)(iv)(B) of this section.

(A) The hazardous waste meets the numerical organic concentration limits, applicable to the hazardous waste, as specified in 40 CFR part 268—Land Disposal Restrictions, listed in the table, “Treatment Standards for Hazardous Waste” in 40 CFR 268.40.

(B) The organic hazardous constituents in the hazardous waste have been treated by the treatment technology established by the EPA for the hazardous waste in 40 CFR 268.42(a), or have been removed or destroyed by an equivalent method of treatment approved by the EPA under 40 CFR 268.42(b).

(v) A tank used for bulk feed of off-site material to a waste incinerator is exempted from the requirements specified in paragraph (b)(1) of this section if the tank meets all of the conditions specified in paragraphs (b)(2)(v)(A) through (b)(2)(v)(C) of this section.

(A) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF—National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

(B) The enclosure and control device serving the tank were installed and began operation prior to July 1, 1996; and

(C) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator must annually perform the verification procedure for the enclosure as specified in Section 5.0 to “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure.”

(c) *Process vents.* (1) For each process vent that is part of an affected source, the owner or operator must meet the requirements in either paragraph (c)(1)(i) or (c)(1)(ii) of this section except for those process vents exempted under paragraph (c)(2) of this section.

(i) The owner or operator controls air emissions from the process vent in accordance with the standards specified in § 63.690 of this subpart.

(ii) The owner or operator determines before placing off-site material in the process equipment associated with the process vent that the average VOHAP concentration of the off-site material is less than ppmw at the point-of-delivery. The owner or operator must perform an initial determination of the average VOHAP concentration of the off-site material using the procedures specified in § 63.694(b) of this subpart before any portion of the off-site material stream is placed in the unit. Thereafter, the owner or operator must review and update, as necessary, this determination at least once every calendar year following the date of the initial determination for the off-site material stream.

(2) A process vent is exempted from the requirements of paragraph (c)(1) of this section when the owner or operator meets one of the exemptions provided in paragraphs (c)(2)(i) through (c)(2)(iii) of this section.

(i) A process vent is exempted from the requirements in paragraph (c)(1) of this section if the process vent is also subject to another subpart under part 63 or 40 CFR part 61, and the owner or operator is controlling the HAP listed in Table 1 of this subpart that are emitted from the process vent in compliance with the provisions specified in the other applicable subpart under part 61 or part 63.

(ii) A process vent is exempted from the requirements specified in paragraph (c)(1) of this section if the owner or operator determines that the process vent stream flow rate is less than 0.005 cubic meters per minute (m^3 /min) at standard conditions (as defined in 40 CFR 63.2). The process vent stream flow rate shall be determined in accordance with the procedures specified in § 63.694(m) of this subpart. Documentation must be prepared by the owner or operator and maintained at the plant site to support the determination of the process vent stream flow rate. This documentation must include identification of each process vent exempted under this paragraph and the test results used to determine the process vent stream flow rate.

(iii) A process vent is exempted from the requirements specified in paragraph (c)(1) of this section if the owner or operator determines that the process vent stream flow rate is less than 6.0 m^3 /min at standard conditions (as defined in 40 CFR 63.2) and the total HAP concentration is less than 20 ppmv. The process vent stream flow rate and total HAP concentration shall be determined in accordance with the procedures specified in § 63.694(m) of this subpart. Documentation must be prepared by the owner or operator and maintained at the plant site to support the determination of the process vent stream flow rate and total HAP concentration. This documentation must include identification of each process vent exempted under this paragraph (c)(2)(iii) and the test results used to determine the process vent stream flow rate and total HAP concentration. The owner or operator must perform a new determination of the process vent stream flow rate and total HAP concentration when the extent of changes to operation of the unit on which the process vent is used could cause either the process vent stream flow rate to exceed the limit of 6.0 m^3 /min or the total HAP concentration to exceed the limit of 20 ppmv.

(d) *Equipment leaks.* The owner or operator must control equipment leaks from each equipment component that is part of the affected source specified in § 63.680(c)(3) of this subpart by implementing leak detection and control measures in accordance with the standards specified in § 63.691 of this subpart.

[64 FR 38965, July 20, 1999]

§ 63.684 Standards: Off-site material treatment.

(a) The provisions of this section apply to the treatment of off-site material to remove or destroy HAP for which § 63.683(b)(1)(ii) of this subpart references the requirements of this section for such treatment.

(b) The owner or operator shall remove or destroy the HAP contained in off-site material streams to be managed in the off-site material management unit in accordance with § 63.683(b)(1)(ii) of this subpart using a treatment process that continuously achieves, under normal operations, one or more of the performance levels specified in paragraphs (b)(1) through (b)(5) of this section (as applicable to the type of treatment process) for the range of off-site material stream compositions and quantities expected to be treated.

(1) *VOHAP concentration.* The treatment process shall reduce the VOHAP concentration of the off-site material using a means, other than by dilution, to achieve one of the following performance levels, as applicable:

(i) In the case when every off-site material stream entering the treatment process has an average VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery, then the VOHAP concentration of the off-site material shall be reduced to a level that is less than 500 ppmw at the point-of-treatment.

(ii) In the case when off-site material streams entering the treatment process are a mixture of off-site material streams having an average VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery with off-site material streams having average VOHAP concentrations less than 500 ppmw at the point-of-delivery, then the VOHAP concentration of the off-site material must be reduced to a level at the point-of-treatment that meets the performance level specified in either paragraph (b)(1)(ii)(A) or (B) of this section.

(A) Less than the VOHAP concentration limit (C_R) established for the treatment process using the procedure specified in § 63.694(d); or

(B) Less than the lowest VOHAP concentration determined for each of the off-site material streams entering the treatment process as determined by the VOHAP concentration of the off-site material at the point-of-delivery.

(2) *HAP mass removal.* The treatment process shall achieve a performance level such that the total quantity of HAP actually removed from the off-site material stream (MR) is equal to or greater than the required mass removal (RMR) established for the off-site material stream using the procedure specified in § 63.694(e) of this subpart. The MR for the off-site material streams shall be determined using the procedures specified in § 63.694(f) of this subpart.

(3) *HAP reduction efficiency.* For any treatment process except a treatment process that uses biological degradation and is performed in an open tank or surface impoundment, the treatment process must achieve the applicable performance level specified in either paragraph (b)(3)(i) or (b)(3)(ii) of this section.

(i) In the case when the owner or operator determines that off-site material stream entering the treatment process has an average VOHAP concentration less than 10,000 ppmw at the point-of-delivery, then the treatment process shall achieve a performance level such that the total quantity of HAP in the off-site material stream is reduced by 95 percent or more. The HAP reduction efficiency (R) for the treatment process shall be determined using the procedure specified in § 63.694(g) of this subpart. The average VOHAP concentration of the off-site material stream at the point-of-delivery shall be determined using the procedure specified in § 63.694(b) of this subpart.

(ii) In the case when the off-site material stream entering the treatment process has an average VOHAP concentration equal to or greater than 10,000 ppmw at the point-of-delivery, then the treatment process shall achieve a performance level such that the total quantity of HAP in the off-site material stream is reduced by 95 percent or more, and the average VOHAP concentration of the off-site material at the point-of-treatment is less than 100 parts per million by weight (ppmw). The HAP reduction efficiency (R) for the treatment process shall be determined using the procedure specified in § 63.694(g) of this subpart. The average VOHAP concentration of the off-site material stream at the point-of-treatment shall be determined using the procedure specified in § 63.694(c) of this subpart.

(4) *Biological degradation performed in an open tank or surface impoundment.* A treatment process using biological degradation and performed in an open tank or surface impoundment must achieve the performance level specified in either paragraph (b)(4)(i) or (b)(4)(ii) of this section.

(i) The HAP reduction efficiency (R) for the treatment process is equal to or greater than 95 percent, and the HAP biodegradation efficiency (R_{bio}) for the treatment process is equal to or greater than 95 percent. The HAP reduction efficiency (R) shall be determined using the procedure specified in § 63.694(g) of this subpart. The HAP biodegradation efficiency (R_{bio}) shall be determined in accordance with the requirements of § 63.694(h) of this subpart.

(ii) The total quantity of HAP actually removed from the off-site material stream by biological degradation (MR_{bio}) shall be equal to or greater than the required mass removal (RMR) established for the off-site material stream using the procedure specified in § 63.694(e) of this subpart. The MR_{bio} of the off-site material stream shall be determined using the procedures specified in § 63.694(i) of this subpart.

(5) *Incineration.* The treatment process must destroy the HAP contained in the off-site material stream using one of the combustion devices specified in paragraphs (b)(5)(i) through (b)(5)(iv) of this section.

(i) An incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270, and the incinerator is designed and operated in accordance with the requirements of 40 CFR part 264, subpart O—Incinerators, or

(ii) An incinerator for which the owner or operator has certified compliance with the interim status requirements of 40 CFR part 265, subpart O—Incinerators.

(iii) A boiler or industrial furnace for which the owner or operator has been issued a final permit under 40 CFR part 270, and the combustion unit is designed and operated in accordance with the requirements of 40 CFR part 266, subpart H—Hazardous Waste Burned in Boilers and Industrial Furnaces.

(iv) A boiler or industrial furnace for which the owner or operator has certified compliance with the interim status requirements of 40 CFR part 266, subpart H Hazardous Waste Burned in Boilers and Industrial Furnaces.

(c) For a treatment process that removes the HAP from the off-site material by a means other than thermal destruction or biological degradation to achieve one of the performances levels specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, the owner or operator shall manage the HAP removed from the off-site material in such a manner to minimize release of these HAP to the atmosphere, to the extent practical. Examples of HAP emission control measures that meet the requirements of this paragraph include managing the HAP removed from the off-site material in units that use air emission controls in accordance with the standards specified in §§ 63.685 through 63.689 of this subpart, as applicable to the unit.

(d) When the owner or operator treats the off-site material to meet one of the performance levels specified in paragraphs (b)(1) through (b)(4) of this section, the owner or operator shall demonstrate that the treatment process achieves the selected performance level for the range of expected off-site material stream compositions expected to be treated. An initial demonstration shall be performed as soon as possible but no later than 30 days after first time an owner or operator begins using the treatment process to manage off-site material streams in accordance with the requirements of either § 63.683(b)(1)(ii) or § 63.683(b)(2)(ii) of this subpart as applicable to the affected off-site material management unit or process equipment. Thereafter, the owner or operator shall review and update, as necessary, this demonstration at least once every calendar year following the date of the initial demonstration.

(e) When the owner or operator treats the off-site material to meet one of the performance levels specified in paragraphs (b)(1) through (b)(4) of this section, the owner or operator shall ensure that the treatment process is achieving the applicable performance requirements by continuously monitoring the operation of the process when it is used to treat off-site material by complying with paragraphs (e)(1) through (e)(3) or, for biological treatment units, paragraph (e)(4) of this section:

(1) A continuous monitoring system shall be installed and operated for each treatment that measures operating parameters appropriate for the treatment process technology. This system shall include a continuous recorder that records the measured values of the selected operating parameters. The monitoring equipment shall be installed, calibrated, and maintained in accordance with the equipment manufacturer's specifications. The continuous recorder shall be a data recording device that is capable of recording either an instantaneous data value at least once every 15 minutes or an average value for intervals of 15 minutes or less.

(2) For each monitored operating parameter, the owner or operator shall establish a minimum operating parameter value or a maximum operating parameter value, as appropriate, to define the range of conditions at which the treatment process must be operated to continuously achieve the applicable performance requirements of this section.

(3) When the treatment process is operating to treat off-site material, the owner or operator shall inspect the data recorded by the continuous monitoring system on a routine basis and operate the treatment process such that the actual value of each monitored operating parameter is greater than the minimum operating parameter value or less than the maximum operating parameter value, as appropriate, established for the treatment process.

(4) When the treatment process is a biological treatment process that is complying with paragraph (b)(4) of this section, the owner or operator must establish and implement a written procedure to monitor the appropriate

parameters that demonstrate proper operation of the biological treatment unit in accordance with the evaluation required in § 63.694(h) of this subpart. The written procedure must list the operating parameters that will be monitored and state the frequency of monitoring to ensure that the biological treatment unit is operating between the minimum operating parameter values and maximum operating parameter values to establish that the biological treatment unit is continuously achieving the performance requirement.

(f) The owner or operator must maintain records for each treatment process in accordance with the requirements of § 63.696(a) of this subpart.

(g) The owner or operator must prepare and submit reports for each treatment process in accordance with the requirements of § 63.697(a) of this subpart.

(h) The Administrator may at any time conduct or request that the owner or operator conduct testing necessary to demonstrate that a treatment process is achieving the applicable performance requirements of this section. The testing shall be conducted in accordance with the applicable requirements of this section. The Administrator may elect to have an authorized representative observe testing conducted by the owner or operator.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38967, July 20, 1999; 66 FR 1266, Jan. 8, 2001; 68 FR 37351, June 23, 2003]

§ 63.685 Standards: Tanks.

(a) The provisions of this section apply to the control of air emissions from tanks for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each tank subject to this section in accordance with the following applicable requirements:

(1) For a tank that is part of an existing affected source but the tank is not used to manage off-site material having a maximum HAP vapor pressure kilopascal (kPa) that is equal to or greater than 76.6 kPa nor is the tank used for a waste stabilization process as defined in § 63.681 of this subpart, the owner or operator shall determine whether the tank is required to use either Tank Level 1 controls or Tank Level 2 controls as specified for the tank by Table 3 of this subpart based on the off-site material maximum HAP vapor pressure and the tank's design capacity. The owner or operator shall control air emissions from a tank required by Table 3 to use Tank Level 1 controls in accordance with the requirements of paragraph (c) of this section. The owner or operator shall control air emissions from a tank required by Table 3 to use Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section.

(2) For a tank that is part of a new affected source but the tank is not used to manage off-site material having a maximum HAP vapor pressure that is equal to or greater than 76.6 kPa nor is the tank used for a waste stabilization process as defined in § 63.681 of this subpart, the owner or operator shall determine whether the tank is required to use either Tank Level 1 controls or Tank Level 2 controls as specified for the tank by Table 4 of this subpart based on the off-site material maximum HAP vapor pressure and the tank's design capacity. The owner or operator shall control air emissions from a tank required by Table 4 to use Tank Level 1 controls in accordance with the requirements of paragraph (c) of this section. The owner or operator shall control air emissions from a tank required by Table 4 to use Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section.

(3) For a tank that is used for a waste stabilization process, the owner or operator shall control air emissions from the tank by using Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section.

(4) For a tank that manages off-site material having a maximum HAP vapor pressure that is equal to or greater than 76.6 kPa, the owner or operator must control air emissions by using one of the tanks specified in paragraphs (b)(4)(i) through (b)(4)(iii) of this section.

(i) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (g) of this section;

(ii) A pressure tank designed and operated in accordance with the requirements specified in paragraph (h) of this section; or

(iii) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in paragraph (i) of this section.

(c) Owners and operators controlling air emissions from a tank using Tank Level 1 controls shall meet the following requirements:

(1) The owner or operator shall determine the maximum HAP vapor pressure for an off-site material to be managed in the tank using Tank Level 1 controls before the first time the off-site material is placed in the tank. The maximum HAP vapor pressure shall be determined using the procedures specified in § 63.694(j) of this subpart. Thereafter, the owner or operator shall perform a new determination whenever changes to the off-site material managed in the tank could potentially cause the maximum HAP vapor pressure to increase to a level that is equal to or greater than the maximum HAP vapor pressure limit for the tank design capacity category specified in Table 3 or Table 4 of this subpart, as applicable to the tank.

(2) The owner or operator must control air emissions from the tank in accordance with the requirements in either paragraph (c)(2)(i), (c)(2)(ii), or (c)(2)(iii) of this section, as applicable to the tank.

(i) The owner or operator controls air emissions from the tank in accordance with the provisions specified in subpart 00 of 40 CFR part 63—National Emission Standards for Tanks—Level 1.

(ii) As an alternative to meeting the requirements in paragraph (c)(2)(i) of this section, an owner or operator may control air emissions from the tank in accordance with the provisions for Tank Level 2 controls as specified in paragraph (d) of this section.

(iii) As an alternative to meeting the requirements in paragraph (c)(2)(i) of this section when a tank is used as an interim transfer point to transfer off-site material from containers to another off-site material management unit, an owner or operator may control air emissions from the tank in accordance with the requirements in paragraphs (c)(2)(iii)(A) and (c)(2)(iii)(B) of this section. An example of such a tank is an in-ground tank into which organic-contaminated debris is dumped from roll-off boxes or dump trucks, and then this debris is promptly transferred from the tank to a macroencapsulation unit by a backhoe.

(A) During those periods of time when the material transfer activity is occurring, the tank may be operated without a cover.

(B) At all other times, air emissions from the tank must be controlled in accordance with the provisions specified in 40 CFR part 67, subpart 00—National Emission Standards for Tanks—Level 1.

(d) Owners and operators controlling air emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in paragraph (e) of this section;

(2) A tank equipped with an external floating roof in accordance with the requirements specified in paragraph (f) of this section;

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (g) of this section;

(4) A pressure tank designed and operated in accordance with the requirements specified in paragraph (h) of this section; or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in paragraph (i) of this section.

(e) The owner or operator who elects to control air emissions from a tank using a fixed-roof with an internal floating roof shall meet the requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in § 63.681 of this subpart; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim spaces vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified in § 63.695(b) of this subpart.

(f) The owner or operator who elects to control tank emissions by using an external floating roof shall meet the requirements specified in paragraphs (f)(1) through (f)(3) of this section.

(1) The owner or operator shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in § 63.681 of this subpart. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters (cm2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters (24 inches) above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm).

(iii) The external floating roof shall be meet the following specifications:

(A) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float wells shall be equipped with covers designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vents shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The owner or operator shall inspect the external floating roof in accordance with the procedures specified in § 63.695(b) of this subpart.

(g) The owner or operator who controls tank air emissions by venting to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3) of this section.

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 63.693 of this subpart.

(2) Whenever an off-site material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of the tank.

(ii) Opening of a safety device, as defined in § 63.681 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the procedures specified in § 63.695 of this subpart.

(h) The owner or operator who elects to control tank air emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in § 63.694(k) of this subpart.

(3) Whenever an off-site material is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except under either of the following conditions as specified in paragraph (h)(3)(i) or (h)(3)(ii) of this section.

(i) At those times when opening of a safety device, as defined in § 63.681 of this subpart, is required to avoid an unsafe condition.

(ii) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of § 63.693 of this subpart.

(i) The owner or operator who elects to control air emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in paragraphs (i)(1) through (4) of this section.

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in § 63.693 of this subpart.

(3) Opening of a safety device, as defined in § 63.681 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(4) The owner or operator shall inspect and monitor the closed-vent system and control device as specified in § 63.693.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38968, July 20, 1999; 66 FR 1266, Jan. 8, 2001]

§ 63.686 Standards: Oil-water and organic-water separators.

(a) The provisions of this section apply to the control of air emissions from oil-water separators and organic-water separators for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each separator subject to this section by using one of the following:

(1) A floating roof in accordance with all applicable provisions specified in 40 CFR 63 subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators. For portions of the separator where it is infeasible to install and operate a floating roof, such as over a weir mechanism, the owner or operator shall comply with the requirements specified in paragraph (b)(2) of this section.

(2) A fixed-roof that is vented through a closed-vent system to a control device in accordance with all applicable provisions specified in 40 CFR 63 subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators.

(3) A pressurized separator that operates as a closed system in accordance with all applicable provisions specified in 40 CFR part 63, subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38969, July 20, 1999]

§ 63.687 Standards: Surface impoundments.

(a) The provisions of this section apply to the control of air emissions from surface impoundments for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each surface impoundment subject to this section by using one of the following:

(1) A floating membrane cover in accordance with the applicable provisions specified in 40 CFR 63 subpart QQ—National Emission Standards for Surface Impoundments; or

(2) A cover that is vented through a closed-vent system to a control device in accordance with all applicable provisions specified in 40 CFR 63 subpart QQ—National Emission Standards for Surface Impoundments.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38969, July 20, 1999]

§ 63.688 Standards: Containers.

(a) The provisions of this section apply to the control of air emissions from containers for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (c) of this section apply to the container.

(1) For a container having a design capacity greater than 0.1 m^3 and less than or equal to 0.46 m^3 , the owner or operator must control air emissions from the container in accordance with the requirements in either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) The owner or operator controls air emissions from the container in accordance with the standards for Container Level 1 controls as specified in 40 CFR part 63, subpart PP—National Emission Standards for Containers.

(ii) As an alternative to meeting the requirements in paragraph (b)(1)(i) of this section, an owner or operator may choose to control air emissions from the container in accordance with the standards for either Container Level 2 controls or Container Level 3 controls as specified in subpart PP of this part 63—National Emission Standards for Containers.

(2) For a container having a design capacity greater than 0.46 m^3 and the container is not in light-material service as defined in § 63.681 of this subpart, the owner or operator must control air emissions from the container in accordance with the requirements in either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(3) For a container having a design capacity greater than 0.46 m^3 and the container is in light-material service as defined in § 63.681 of this subpart, the owner or operator must control air emissions from the container in accordance with the requirements in either paragraph (b)(3)(i) or (b)(3)(ii) of this section.

(i) The owner or operator controls air emissions from the container in accordance with the standards for Container Level 2 controls as specified in 40 CFR part 63, subpart PP—National Emission Standards for Containers.

(ii) As an alternative to meeting the requirements in paragraph (b)(3)(i) of this section, an owner or operator may choose to control air emissions from the container in accordance with the standards for Container Level 3 controls as specified in 40 CFR part 63, subpart PP—National Emission Standards for Containers.

(c) When a container subject to this subpart and having a design capacity greater than 0.1 m^3 is used for treatment of an off-site material by a waste stabilization process as defined in § 63.681 of this subpart, the owner or operator shall control air emissions from the container at those times during the process when the off-site material in the container is exposed to the atmosphere in accordance with the standards for Container Level 3 controls as specified in 40 CFR part 63, subpart PP—National Emission Standards for Containers.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38969, July 20, 1999]

§ 63.689 Standards: Transfer systems.

(a) The provisions of this section apply to the control of air emissions from transfer systems for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) For each transfer system that is subject to this section and is an individual drain system, the owner or operator shall control air emissions in accordance with the standards specified in 40 CFR part 63, subpart RR—National Emission Standards for Individual Drain Systems.

(c) For each transfer system that is subject to this section but is not an individual drain system, the owner or operator shall control air emissions by using one of the transfer systems specified in paragraphs (c)(1) through (c)(3) of this section.

(1) A transfer system that uses covers in accordance with the requirements specified in paragraph (d) of this section.

(2) A transfer system that consists of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed flange).

(3) A transfer system that is enclosed and vented through a closed-vent system to a control device in accordance with the requirements specified in paragraphs (c)(3)(i) and (c)(3)(ii) of this section.

(i) The transfer system is designed and operated such that an internal pressure in the vapor headspace in the enclosure is maintained at a level less than atmospheric pressure when the control device is operating, and

(ii) The closed-vent system and control device are designed and operated in accordance with the requirements of § 63.693 of this subpart.

(d) Owners and operators controlling air emissions from a transfer system using covers in accordance with the provisions of paragraph (c)(1) of this section shall meet the requirements specified in paragraphs (d)(1) through (d)(6) of this section.

(1) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the off-site material as it is conveyed by the transfer system except for the openings at the inlet and outlet to the transfer system through which the off-site material passes. The inlet and outlet openings used for passage of the off-site material through the transfer system shall be the minimum size required for practical operation of the transfer system.

(2) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section joints or between the interface of the cover edge and its mounting.

(3) Except for the inlet and outlet openings to the transfer system through which the off-site material passes, each opening in the cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device.

(4) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the material or its vapors conveyed in the transfer system; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the transfer system on which the cover is installed.

(5) Whenever an off-site material is in the transfer system, the cover shall be installed with each closure device secured in the closed position except as specified in paragraph (d)(5)(i) or (d)(5)(ii) of this section.

(i) Opening of closure devices or removal of the cover is allowed to provide access to the transfer system for performing routine inspection, maintenance, repair, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a hatch or remove the cover to repair conveyance equipment mounted under the cover or to clear a blockage of material inside the system. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable.

(ii) Opening of a safety device, as defined in § 63.681 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(6) The owner or operator shall inspect the air emission control equipment in accordance with the requirements specified in § 63.695 of this subpart.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38970, July 20, 1999]

§ 63.690 Standards: Process vents.

(a) The provisions of this section apply to the control of air emissions from process vents for which § 63.683(c)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator must route the vent stream from each affected process vent through a closed-vent system to a control device that meets the standards specified in § 63.693 of this subpart. For the purpose of complying with this paragraph (b), a primary condenser is not a control device; however, a second condenser or other organic recovery device that is operated downstream of the primary condenser is considered a control device.

[64 FR 38970, July 20, 1999]

§ 63.691 Standards: Equipment leaks.

(a) The provisions of this section apply to the control of air emissions from equipment leaks for which § 63.683(d) references the use of this section for such air emissions control.

(b) The owner or operator shall control the HAP emitted from equipment leaks in accordance with the applicable provisions specified in either paragraph (b)(1) or (b)(2) of this section.

(1) The owner or operator controls the HAP emitted from equipment leaks in accordance with § 61.242 through § 61.247 in 40 CFR part 61, subpart V—National Emission Standards for Equipment Leaks; or

(2) The owner or operator controls the HAP emitted from equipment leaks in accordance with § 63.162 through § 63.182 in subpart H—National Emission Standards for Organic Hazardous Air Pollutants from Equipment Leaks.

[64 FR 38970, July 20, 1999, as amended at 66 FR 1266, Jan. 8, 2001]

§ 63.692 [Reserved]

§ 63.693 Standards: Closed-vent systems and control devices.

(a) The provisions of this section apply to closed-vent systems and control devices used to control air emissions for which another standard references the use of this section for such air emission control.

(b) For each closed-vent system and control device used to comply with this section, the owner or operator shall meet the following requirements:

(1) The owner or operator must use a closed-vent system that meets the requirements specified in paragraph (c) of this section.

(2) The owner or operator must use a control device that meets the requirements specified in paragraphs (d) through (h) of this section as applicable to the type and design of the control device selected by the owner or operator to comply with the provisions of this section.

(3) Whenever gases or vapors containing HAP are vented through a closed-vent system connected to a control device used to comply with this section, the control device must be operating except at those times listed in either paragraph (b)(3)(i) or (b)(3)(ii) of this section.

(i) The control device may be bypassed for the purpose of performing planned routine maintenance of the closed-vent system or control device in situations when the routine maintenance cannot be performed during periods that the emission point vented to the control device is shutdown. On an annual basis, the total time that the closed-vent system or control device is bypassed to perform routine maintenance shall not exceed 240 hours per each calendar year.

(ii) The control device may be bypassed for the purpose of correcting a malfunction of the closed-vent system or control device. The owner or operator shall perform the adjustments or repairs necessary to correct the malfunction as soon as practicable after the malfunction is detected.

(4) The owner or operator must inspect and monitor each closed-vent system in accordance with the requirements specified in either paragraph (b)(4)(i) or (b)(4)(ii) of this section.

(i) The owner or operator inspects and monitors the closed-vent system in accordance with the requirements specified in § 63.695(c) of this subpart, and complies with the applicable recordkeeping requirements in § 63.696 of this subpart and the applicable reporting requirements in § 63.697 of this subpart.

(ii) As an alternative to meeting the requirements specified in paragraph (b)(4)(i) of this section, the owner or operator may choose to inspect and monitor the closed-vent system in accordance with the requirements under 40 CFR part 63, subpart H—National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks as specified in 40 CFR 63.172(f) through (h), and complies with the applicable recordkeeping requirements in 40 CFR 63.181 and the applicable reporting requirements in 40 CFR 63.182.

(5) The owner or operator must monitor the operation of each control device in accordance with the requirements specified in paragraphs (d) through (h) of this section as applicable to the type and design of the control device selected by the owner or operator to comply with the provisions of this section.

(6) The owner or operator shall maintain records for each control device in accordance with the requirements of § 63.696 of this subpart.

(7) The owner or operator shall prepare and submit reports for each control device in accordance with the requirements of § 63.697 of this subpart.

(8) In the case when an owner or operator chooses to use a design analysis to demonstrate compliance of a control device with the applicable performance requirements specified in this section as provided for in paragraphs (d) through (g) of this section, the Administrator may request that the design analysis be revised or amended by the owner or operator to correct any deficiencies identified by the Administrator. If the owner or operator and the Administrator do not agree on the acceptability of using the design analysis (including any changes requested by the Administrator) to demonstrate that the control device achieves the applicable performance requirements, then the disagreement must be resolved using the results of a performance test conducted by the owner or operator in accordance with the requirements of § 63.694(l) of this subpart. The Administrator may choose to have an authorized representative observe the performance test conducted by the owner or operator. Should the results of this performance test not agree with the determination of control device performance based on the design analysis, then the results of the performance test will be used to establish compliance with this subpart.

(c) Closed-vent system requirements.

(1) The vent stream required to be controlled shall be conveyed to the control device by either of the following closed-vent systems:

(i) A closed-vent system that is designed to operate with no detectable organic emissions using the procedure specified in § 63.694(k) of this subpart; or

(ii) A closed-vent system that is designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gage or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(2) In situations when the closed-vent system includes bypass devices that could be used to divert a vent stream from the closed-vent system to the atmosphere at a point upstream of the control device inlet, each bypass device must be equipped with either a flow indicator as specified in paragraph (c)(2)(i) of this section or a seal or locking device as specified in paragraph (c)(2)(ii) of this section. For the purpose of complying with this paragraph (c)(2), low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, or pressure relief valves needed for safety reasons are not subject to the requirements of this paragraph (c)(2).

(i) If a flow indicator is used, the indicator must be installed at the entrance to the bypass line used to divert the vent stream from the closed-vent system to the atmosphere. The flow indicator must indicate a reading at least once every 15 minutes. The owner or operator must maintain records of the following information: hourly records of whether the flow indicator was operating and whether flow was detected at any time during the hour; and records of all periods when flow is detected or the flow indicator is not operating.

(ii) If a seal or locking device is used to comply with paragraph (c)(2) of this section, the device shall be placed on the mechanism by which the bypass device position is controlled (*e.g.,* valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve.

(d) Carbon adsorption control device requirements.

(1) The carbon adsorption system must achieve the performance specifications in either paragraph (d)(1)(i) or (d)(1)(ii) of this section.

(i) Recover 95 percent or more, on a weight-basis, of the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the carbon adsorption system; or

(ii) Recover 95 percent or more, on a weight-basis, of the total HAP listed in Table 1 of this subpart contained in the vent stream entering the carbon adsorption system.

(2) The owner or operator must demonstrate that the carbon adsorption system achieves the performance requirements in paragraph (d)(1) of this section by either performing a performance test as specified in paragraph (d)(2)(i) of this section or a design analysis as specified in paragraph (d)(2)(ii) of this section.

(i) An owner or operator choosing to use a performance test to demonstrate compliance must conduct the test in accordance with the requirements of § 63.694(l) of this subpart.

(ii) An owner or operator choosing to use a design analysis to demonstrate compliance must include as part of this design analysis the information specified in either paragraph (d)(2)(ii)(A) or (d)(2)(ii)(B) of this section as applicable to the carbon adsorption system design.

(A) For a regenerable carbon adsorption system, the design analysis shall address the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total regeneration steam flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of the carbon.

(B) For a nonregenerable carbon adsorption system (e.g., a carbon canister), the design analysis shall address the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration, carbon bed capacity, activated carbon type and working capacity, and design carbon replacement interval based on the total carbon working capacity of the control device and emission point operating schedule.

(3) The owner or operator must monitor the operation of the carbon adsorption system in accordance with the requirements of § 63.695(e) using one of the continuous monitoring systems specified in paragraphs (d)(3)(i) through (iii) of this section. Monitoring the operation of a nonregenerable carbon adsorption system (*e.g.,* a carbon canister) using a continuous monitoring system is not required when the carbon canister or the carbon in the control device is replaced on a regular basis according to the requirements in paragraph (d)(4)(iii) of this section.

(i) For a regenerative-type carbon adsorption system:

(A) A continuous parameter monitoring system to measure and record the average total regeneration stream mass flow or volumetric flow during each carbon bed regeneration cycle. The integrating regenerating stream flow monitoring device must have an accuracy of ±10 percent; and

(B) A continuous parameter monitoring system to measure and record the average carbon bed temperature for the duration of the carbon bed steaming cycle and to measure the actual carbon bed temperature after regeneration and within 15 minutes of completing the cooling cycle. The accuracy of the temperature monitoring device must be ±1 percent of the temperature being measured, expressed in degrees Celsius or ±5 °C, whichever is greater.

(ii) A continuous monitoring system to measure and record the daily average concentration level of organic compounds in the exhaust gas stream from the control device. The organic monitoring system must comply either with Performance Specification 8 or 9 in 40 CFR part 60, appendix B. The relative accuracy provision of Performance Specification 8, Sections 2.4 and 3 need not be conducted.

(iii) A continuous monitoring system that measures other alternative operating parameters upon approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (f)(5) of this part.

(4) The owner or operator shall manage the carbon used for the carbon adsorption system, as follows:

(i) Following the initial startup of the control device, all carbon in the control device shall be replaced with fresh carbon on a regular, predetermined time interval that is no longer than the carbon service life established for the carbon adsorption system. The provisions of this paragraph (d)(4)(i) do not apply to a nonregenerable carbon adsorption system (*e.g.,* a carbon canister) for which the carbon canister or the carbon in the control device is replaced on a regular basis according to the requirements in paragraph (d)(4)(iii) of this section.

(ii) The spent carbon removed from the carbon adsorption system must be either regenerated, reactivated, or burned in one of the units specified in paragraphs (d)(4)(ii)(A) through (d)(4)(ii)(G) of this section.

(A) Regenerated or reactivated in a thermal treatment unit for which the owner or operator has been issued a final permit under 40 CFR part 270 that implements the requirements of 40 CFR part 264, subpart X.

(B) Regenerated or reactivated in a thermal treatment unit equipped with and operating air emission controls in accordance with this section.

(C) Regenerated or reactivated in a thermal treatment unit equipped with and operating organic air emission controls in accordance with a national emission standard for hazardous air pollutants under another subpart in 40 CFR part 63 or 40 CFR part 61.

(D) Burned in a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 that implements the requirements of 40 CFR part 264, subpart O.

(E) Burned in a hazardous waste incinerator for which the owner or operator has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR part 265, subpart O.

(F) Burned in a boiler or industrial furnace for which the owner or operator has been issued a final permit under 40 CFR part 270 that implements the requirements of 40 CFR part 266, subpart H.

(G) Burned in a boiler or industrial furnace for which the owner or operator has designed and operates the unit in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(iii) As an alternative to meeting the requirements in paragraphs (d)(3) and (d)(4)(i) of this section, an owner or operator of a nonregenerable carbon adsorption system may choose to replace on a regular basis the carbon canister or the carbon in the control device using the procedures in either paragraph (d)(4)(iii)(A) or (d)(4)(iii)(B) of this section. For the purpose of complying with this paragraph (d)(4)(iii), a nonregenerable carbon adsorption system means a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device, such as a carbon canister. The spent carbon removed from the nonregenerable carbon adsorption system must be managed according to the requirements in paragraph (d)(4)(ii) of this section.

(A) Monitor the concentration level of the organic compounds in the exhaust vent from the carbon adsorption system on a regular schedule, and when carbon breakthrough is indicated, immediately replace either the existing carbon canister with a new carbon canister or replace the existing carbon in the control device with fresh carbon. Measurement of the concentration level of the organic compounds in the exhaust vent stream must be made with a detection instrument that is appropriate for the composition of organic constituents in the vent stream and is routinely calibrated to measure the organic concentration level expected to occur at breakthrough. The monitoring frequency must be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of paragraph (d)(2)(ii)(B) of this section, whichever is longer.

(B) Replace either the existing carbon canister with a new carbon canister or replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of paragraph (d)(2)(ii)(B) of this section.

(e) Condenser control device requirements.

(1) The condenser must achieve the performance specifications in either paragraph (e)(1)(i) or (e)(1)(ii) of this section.

(i) Recover 95 percent or more, on a weight-basis, of the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the condenser; or

(ii) Recover 95 percent or more, on a weight-basis, of the total HAP, listed in Table 1 of this subpart, contained in the vent stream entering the condenser.

(2) The owner or operator must demonstrate that the condenser achieves the performance requirements in paragraph (e)(1) of this section by either performing a performance test as specified in paragraph (e)(2)(i) of this section or a design analysis as specified in paragraph (e)(2)(ii) of this section.

(i) An owner or operator choosing to use a performance tests to demonstrate compliance must conduct the test in accordance with the requirements of § 63.694(l) of this subpart.

(ii) An owner or operator choosing to use a design analysis to demonstrate compliance must include as part of this design analysis the following information: description of the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature; and specification of the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(3) The owner or operator must monitor the operation of the condenser in accordance with the requirements of § 63.695(e) of this subpart using one of the continuous monitoring systems specified in paragraphs (e)(3)(i) through (e)(3)(iii) of this section.

(i) A continuous parameter monitoring system to measure and record the daily average temperature of the exhaust gases from the control device. The accuracy of the temperature monitoring device shall be ±1 percent of the temperature being measured, expressed in degrees Celsius or ±5 °C, whichever is greater.

(ii) A continuous monitoring system to measure and record the daily average concentration level of organic compounds in the exhaust gas stream from the control device. The organic monitoring system must comply either with Performance Specification 8 or 9 in 40 CFR part 60, appendix B. The relative accuracy provision of Performance Specification 8, Sections 2.4 and 3 need not be conducted.

(iii) A continuous monitoring system that measures other alternative operating parameters upon approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (f)(5) of this part.

(f) Vapor incinerator control device requirements.

(1) The vapor incinerator must achieve the performance specifications in either paragraph (f)(1)(i), (f)(1)(ii), or (f)(1)(iii) of this section.

(i) Destroy the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the vapor incinerator either:

(A) By 95 percent or more, on a weight-basis, or

(B) To achieve a total incinerator outlet concentration for the TOC, less methane and ethane, of less than or equal to ppmv on a dry basis corrected to 3 percent oxygen.

(ii) Destroy the HAP listed in Table 1 of this subpart contained in the vent stream entering the vapor incinerator either:

(A) By 95 percent or more, on a total HAP weight-basis, or

(B) To achieve a total incinerator outlet concentration for the HAP, listed in Table 1 of this subpart, of less than or equal to ppmv on a dry basis corrected to 3 percent oxygen.

(iii) Maintain the conditions in the vapor incinerator combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher.

(2) The owner or operator must demonstrate that the vapor incinerator achieves the performance requirements in paragraph (f)(1) of this section by either performing a performance test as specified in paragraph (f)(2)(i) of this section or a design analysis as specified in paragraph (f)(2)(ii) of this section.

(i) An owner or operator choosing to use a performance test to demonstrate compliance must conduct the test in accordance with the requirements of § 63.694(l) of this subpart.

(ii) An owner or operator choosing to use a design analysis to demonstrate compliance must include as part of this design analysis the information specified in either paragraph (f)(2)(ii)(A) or (f)(2)(ii)(B) of this section as applicable to the vapor incinerator design.

(A) For a thermal vapor incinerator, the design analysis shall address the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures in the combustion chamber and the combustion chamber residence time.

(B) For a catalytic vapor incinerator, the design analysis shall address the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet, and the design service life of the catalyst.

(3) The owner or operator must monitor the operation of the vapor incinerator in accordance with the requirements of § 63.695(e) of this subpart using one of the continuous monitoring systems specified in paragraphs (f)(3)(i) through (f)(3)(iv) of this section as applicable to the type of vapor incinerator used.

(i) For a thermal vapor incinerator, a continuous parameter monitoring system to measure and record the daily average temperature of the exhaust gases from the control device. The accuracy of the temperature monitoring device must be ±1 percent of the temperature being measured, expressed in degrees Celsius of ±0.5 °C, whichever is greater.

(ii) For a catalytic vapor incinerator, a temperature monitoring device capable of monitoring temperature at two locations equipped with a continuous recorder. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For either type of vapor incinerator, a continuous monitoring system to measure and record the daily average concentration of organic compounds in the exhaust vent stream from the control device. The organic monitoring system must comply either with Performance Specification 8 or 9 in 40 CFR part 60, appendix B. The relative accuracy provision of Performance Specification 8, Sections 2.4 and 3 need not be conducted.

(iv) For either type of vapor incinerator, a continuous monitoring system that measures alternative operating parameters other than those specified in paragraph (f)(3)(i) or (f)(3)(ii) of this section upon approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (f)(5) of this part.

(g) Boilers and process heaters control device requirements.

(1) The boiler or process heater must achieve the performance specifications in either paragraph (g)(1)(i), (g)(1)(ii), (g)(1)(iii), (g)(1)(iv), or (g)(1)(v) of this section.

(i) Destroy the total organic compounds (TOC), less methane and ethane, contained in the vent stream introduced into the flame zone of the boiler or process heater either:

(A) By 95 percent or more, on a weight-basis, or

(B) To achieve in the exhausted combustion gases a total concentration for the TOC, less methane and ethane, of less than or equal to 20 parts ppmv on a dry basis corrected to 3 percent oxygen.

(ii) Destroy the HAP listed in Table 1 of this subpart contained in the vent stream entering the vapor incinerator either:

(A) By 95 percent or more, on a total HAP weight-basis, or

(B) To achieve in the exhausted combustion gases a total concentration for the HAP, listed in Table 1 of the subpart, of less than or equal to 20 ppmv on a dry basis corrected to 3 percent oxygen.

(iii) Introduce the vent stream into the flame zone of the boiler or process heater and maintain the conditions in the combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher.

(iv) Introduce the vent stream with the fuel that provides the predominate heat input to the boiler or process heater (i.e., the primary fuel); or

(v) Introduce the vent stream to a boiler or process heater for which the owner or operator either has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H of this chapter; or has certified compliance with the interim status requirements of 40 CFR part 266, subpart H of this chapter.

(2) The owner or operator must demonstrate that the boiler or process heater achieves the performance specifications in paragraph (g)(1) of this section chosen by the owner or operator using the applicable method specified in paragraph (g)(2)(i) or (g)(2)(ii) of this section.

(i) If an owner or operator chooses to comply with the performance specifications in either paragraph (g)(1)(i), (g)(1)(ii), or (g)(1)(iii) of this section, the owner or operator must demonstrate compliance with the applicable performance specifications by either performing a performance test as specified in paragraph (g)(2)(i)(A) of this section or a design analysis as specified in paragraph (g)(2)(i)(B) of this section.

(A) An owner or operator choosing to use a performance test to demonstrate compliance must conduct the test in accordance with the requirements of § 63.694(l) of this subpart.

(B) An owner or operator choosing to use a design analysis to demonstrate compliance must include as part of this design analysis the following information: description of the vent stream composition, constituent concentrations, and flow rate; specification of the design minimum and average flame zone temperatures and combustion zone residence time; and description of the method and location by which the vent stream is introduced into the flame zone.

(ii) If an owner or operator chooses to comply with the performance specifications in either paragraph (g)(1)(iv) or (g)(1)(v) of this section, the owner or operator must demonstrate compliance by maintaining the records that document that the boiler or process heater is designed and operated in accordance with the applicable requirements of this section.

(3) For a boiler or process heater complying with the performance specifications in either paragraph (g)(1)(i), (g)(1)(ii), or (g)(1)(iii) of this section, the owner or operator must monitor the operation of a boiler or process heater in accordance with the requirements of § 63.695(e) of this subpart using one of the continuous monitoring systems specified in paragraphs (g)(3)(i) through (g)(3)(iii) of this section.

(i) A continuous parameter monitoring system to measure and record the daily average combustion zone temperature. The accuracy of the temperature sensor must be ±1 percent of the temperature being measured, expressed in degrees Celsius or ±0.5 °C, whichever is greater;

(ii) A continuous monitoring system to measure and record the daily average concentration of organic compounds in the exhaust vent stream from the control device. The organic monitoring system must comply either with Performance Specification 8 or 9 in 40 CFR part 60, appendix B. The relative accuracy provision of Performance Specification 8, Sections 2.4 and 3 need not be conducted.

(iii) A continuous monitoring system that measures alternative operating parameters other than those specified in paragraph (g)(3)(i) or (g)(3)(ii) of this section upon approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (f)(5) of this part.

(h) Flare control device requirements.

(1) The flare must be designed and operated in accordance with the requirements in 40 CFR 63.11(b).

(2) The owner or operator must demonstrate that the flare achieves the requirements in paragraph (h)(1) of this section by performing the procedures specified in paragraph (h)(2)(i) of this section. A previous compliance demonstration for the flare that meets all of the conditions specified in paragraph (h)(2)(ii) of this section may be used by an owner or operator to demonstrate compliance with this paragraph (h)(2).

(i) To demonstrate that a flare achieves the requirements in paragraph (h)(1) of this section, the owner or operator performs all of the procedures specified in paragraphs (h)(2)(i)(A) through (h)(2)(i)(C) of this section.

(A) The owner or operator conducts a visible emission test for the flare in accordance with the requirements specified in 40 CFR 63.11(b)(4).

(B) The owner or operator determines the net heating value of the gas being combusted in the flare in accordance with the requirements specified in 40 CFR 63.11(b)(6); and

(C) The owner or operator determines the flare exit velocity in accordance with the requirements applicable to the flare design as specified in 40 CFR 63.11(b)(7) or 40 CFR 63.11(b)(8).

(ii) A previous compliance demonstration for the flare may be used by an owner or operator to demonstrate compliance with paragraph (h)(2) of this section provided that all conditions for the compliance determination and subsequent flare operation are met as specified in paragraphs (h)(2)(ii)(A) and (h)(2)(ii)(B) of this section.

(A) The owner or operator conducted the compliance determination using the procedures specified in paragraph (h)(2)(i) of this section.

(B) No flare operating parameter or process changes have occurred since completion of the compliance determination which could affect the compliance determination results.

(3) The owner or operator must monitor the operation of the flare using a heat sensing monitoring device (including but not limited to a thermocouple, ultraviolet beam sensor, or infrared sensor) that continuously detects the presence of a pilot flame. The owner or operator must record, for each 1-hour period, whether the monitor was continuously operating and whether a pilot flame was continuously present during each hour as required in § 63.696(b)(3) of this subpart.

[64 FR 38970, July 20, 1999, as amended at 66 FR 1266, Jan. 8, 2001; 68 FR 37351, June 23, 2003]

§ 63.694 Testing methods and procedures.

(a) This section specifies the testing methods and procedures required for this subpart to perform the following:

(1) To determine the average VOHAP concentration for off-site material streams at the point-of-delivery for compliance with standards specified § 63.683 of this subpart, the testing methods and procedures are specified in paragraph (b) of this section.

(2) To determine the average VOHAP concentration for treated off-site material streams at the point-of-treatment for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (c) of this section.

(3) To determine the treatment process VOHAP concentration limit (C_R) for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (d) of this section.

(4) To determine treatment process required HAP removal rate (RMR) for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (e) of this section.

(5) To determine treatment process actual HAP removal rate (MR) for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (f) of this section.

(6) To determine treatment process required HAP reduction efficiency (R) for compliance with standards specified in § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (g) of this section.

(7) To determine treatment process required HAP biodegradation efficiency (R_{bio}) for compliance with standards specified in § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (h) of this section.

(8) To determine treatment process required actual HAP mass removal rate (MR_{bio}) for compliance with standards specified in§ 63.684 of this subpart, the testing methods and procedures are specified in paragraph (i) of this section.

(9) To determine maximum organic HAP vapor pressure of off-site materials in tanks for compliance with the standards specified in § 63.685 of this subpart, the testing methods and procedures are specified in paragraph (j) of this section.

(10) To determine no detectable organic emissions, the testing methods and procedures are specified in paragraph (k) of this section.

(11) To determine closed-vent system and control device performance for compliance with the standards specified in § 63.693 of this subpart, the testing methods and procedures are specified in paragraph (l) of this section.

(12) To determine process vent stream flow rate and total organic HAP concentration for compliance with the standards specified in § 63.693 of this subpart, the testing methods and procedures are specified in paragraph (m) of this section.

(b) Testing methods and procedures to determine average VOHAP concentration of an off-site material stream at the point-of-delivery.

(1) The average VOHAP concentration of an off-site material at the point-of-delivery shall be determined using either direct measurement as specified in paragraph (b)(2) of this section or by knowledge as specified in paragraph (b)(3) of this section.

(2) *Direct measurement to determine VOHAP concentration*— (i) *Sampling.* Samples of the off-site material stream shall be collected from the container, pipeline, or other device used to deliver the off-site material stream to the plant site in a manner such that volatilization of organics contained in the sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(A) The averaging period to be used for determining the average VOHAP concentration for the off-site material stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the off-site material stream but shall not exceed 1 year.

(B) A sufficient number of samples, but no less than four samples, shall be collected to represent the complete range of HAP compositions and HAP quantities that occur in the off-site material stream during the entire averaging period due to normal variations in the operating conditions for the source or process generating the off-site material stream. Examples of such normal variations are seasonal variations in off-site material quantity or fluctuations in ambient temperature.

(C) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the plant site operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846 or Method 25D in 40 CFR part 60, appendix A.

(ii) *Analysis.* Each collected sample must be prepared and analyzed in accordance with one of the following methods as applicable to the sampled off-site material for the purpose of measuring the HAP listed in Table 1 of this subpart:

(A) Method 305 in 40 CFR part 63, appendix A.

(B) Method 25D in 40 CFR part 60, appendix A.

(C) Method 624 in 40 CFR part 136, appendix A. If this method is used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 40 CFR 136.5 must be followed.

(D) Method 625 in 40 CFR part 136, appendix A. For the purpose of using this method to comply with this subpart, the owner or operator must perform corrections to these compounds based on the "accuracy as recovery" using the factors in Table 7 of the method. If this method is used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 40 CFR 136.5 must be followed.

(E) Method 1624 in 40 CFR part 136, appendix A.

(F) Method 1625 in 40 CFR part 136, appendix A.

(G) Method 8260 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992. As an alternative, an owner or operator may use any more recent, updated version of Method 8260 approved by the EPA. For the purpose of using Method 8260 to comply with this subpart, the owner or operator must maintain a formal quality assurance program consistent with section 8 of Method 8260, and this program must include the following elements related to measuring the concentrations of volatile compounds:

(*1*) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, and preparation steps.

(*2*) Documentation of specific quality assurance procedures followed during sampling, sample preparation, sample introduction, and analysis.

(*3*) Measurement of the average accuracy and precision of the specific procedures, including field duplicates and field spiking of the off-site material source before or during sampling with compounds having similar chemical characteristics to the target analytes.

(H) Method 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992. As an alternative, an owner or operator may use any more recent, updated version of Method 8270 approved by the EPA. For the purpose of using Method 8270 to comply with this subpart, the owner or operator must maintain a formal quality assurance program consistent with Method 8270, and this program must include the following elements related to measuring the concentrations of volatile compounds:

(*1*) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, and preparation steps.

(*2*) Documentation of specific quality assurance procedures followed during sampling, sample preparation, sample introduction, and analysis.

(*3*) Measurement of the average accuracy and precision of the specific procedures, including field duplicates and field spiking of the off-site material source before or during sampling with compounds having similar chemical characteristics to the target analytes.

(I) Any other analysis method that has been validated in accordance with the procedures specified in section 5.1 and section 5.3 and the corresponding calculations in section 6.1 or section 6.3 of Method 301 in appendix A in 40 CFR

part 63. The data are acceptable if they meet the criteria specified in section 6.1.5 or section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range of 0.7 to 1.30. Other sections of Method 301 are not required.

(iii) *Calculations*. The average VOHAP concentration (C) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with paragraph (b)(2)(ii) of this section and the following equation. An owner or operator using a test method that provides species-specific chemical concentrations may adjust the measured concentrations to the corresponding concentration values which would be obtained had the off-site material samples been analyzed using Method 305. To adjust these data, the measured concentration for each individual HAP chemical species contained in the off-site material is multiplied by the appropriate species-specific adjustment factor (f_{m305}) listed in Table 1 of this subpart.

$$C = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

C = Average VOHAP concentration of the off-site material at the point-of-delivery on a mass-weighted basis, ppmw.

i = Individual sample "i" of the off-site material.

n = Total number of samples of the off-site material collected (at least 4) for the averaging period (not to exceed 1 year).

Q_i = Mass quantity of off-site material stream represented by C_i , kg/hr.

Q_T = Total mass quantity of off-site material during the averaging period, kg/hr.

C_i = Measured VOHAP concentration of sample "i" as determined in accordance with the requirements of § 63.694(a), ppmw.

(3) Knowledge of the off-site material to determine VOHAP concentration.

(i) Documentation shall be prepared that presents the information used as the basis for the owner's or operator's knowledge of the off-site material stream's average VOHAP concentration. Examples of information that may be used as the basis for knowledge include: material balances for the source or process generating the off-site material stream; species-specific chemical test data for the off-site material stream from previous testing that are still applicable to the current off-site material stream; previous test data for other locations managing the same type of off-site material stream; or other knowledge based on information in documents such as manifests, shipping papers, or waste certification notices.

(ii) If test data are used as the basis for knowledge, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VOHAP concentration. For example, an owner or operator may use HAP concentration test data for the off-site material stream that are validated in accordance with Method 301 in 40 CFR part 63, appendix A of this part as the basis for knowledge of the off-site material.

(iii) An owner or operator using species-specific chemical concentration test data as the basis for knowledge of the off-site material may adjust the test data to the corresponding average VOHAP concentration value which would be obtained had the off-site material samples been analyzed using Method 305. To adjust these data, the measured concentration for each individual HAP chemical species contained in the off-site material is multiplied by the appropriate species-specific adjustment factor (f_{m305}) listed in Table 1 of this subpart.

(iv) In the event that the Administrator and the owner or operator disagree on a determination of the average VOHAP concentration for an off-site material stream using knowledge, then the results from a determination of VOHAP concentration using direct measurement as specified in paragraph (b)(2) of this section shall be used to establish

compliance with the applicable requirements of this subpart. The Administrator may perform or request that the owner or operator perform this determination using direct measurement.

(c) Determination of average VOHAP concentration of an off-site material stream at the point-of-treatment.

(1) *Sampling.* Samples of the off-site material stream shall be collected at the point-of-treatment in a manner such that volatilization of organics contained in the sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(i) The averaging period to be used for determining the average VOHAP concentration for the off-site material stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the off-site material stream but shall not exceed 1 year.

(ii) A sufficient number of samples, but no less than four samples, shall be collected to represent the complete range of HAP compositions and HAP quantities that occur in the off-site material stream during the entire averaging period due to normal variations in the operating conditions for the treatment process. Examples of such normal variations are seasonal variations in off-site material quantity or fluctuations in ambient temperature.

(iii) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the plant site operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 or Method 25D in 40 CFR part 60, appendix A.

(2) *Analysis.* Each collected sample must be prepared and analyzed in accordance with one of the methods specified in paragraphs (b)(2)(ii)(A) through (b)(2)(ii)(I) of this section, as applicable to the sampled off-site material, for the purpose of measuring the HAP listed in Table 1 of this subpart.

(3) *Calculations.* The average VOHAP concentration ($\bar{C}$) a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with paragraph (c)(2) of this section and the following equation. An owner or operator using a test method that provides species-specific chemical concentrations may adjust the measured concentrations to the corresponding concentration values which would be obtained had the off-site material samples been analyzed using Method 305. To adjust these data, the measured concentration for each individual HAP chemical species contained in the off-site material is multiplied by the appropriate species-specific adjustment factor (f_{m305}) listed in Table 1 of this subpart.

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

$\bar{C}$= Average VOHAP concentration of the off-site material on a mass-weighted basis, ppmw.

i = Individual sample "i" of the off-site material.

n = Total number of samples of the off-site material collected (at least 4) for the averaging period (not to exceed 1 year).

Q_i = Mass quantity of off-site material stream represented by C_i , kg/hr.

Q_T = Total mass quantity of off-site material during the averaging period, kg/hr.

C_i = Measured VOHAP concentration of sample "i" as determined in accordance with the requirements of § 63.694(a), ppmw.

(d) *Determination of treatment process VOHAP concentration limit* (C_R). (1) All of the off-site material streams entering the treatment process shall be identified.

(2) The average VOHAP concentration of each off-site material stream at the point-of-delivery shall be determined using the procedures specified in paragraph (b) of this section.

(3) The VOHAP concentration limit (C_R) shall be calculated by using the results determined for each individual off-site material stream and the following equation:

$$C_R = \frac{\sum_{x=1}^{m}\left(Q_x \times \bar{C}_x\right) + \sum_{y=1}^{n}\left(Q_y \times 500\ ppmw\right)}{\sum_{x=1}^{m} Q_x + \sum_{y=1}^{n} Q_y}$$

where:

C_R =VOHAP concentration limit, ppmw.

x=Individual off-site material stream "x" that has a VOHAP concentration less than 500 ppmw at the point-of-delivery.

y=Individual off-site material stream "y" that has a VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery.

m=Total number of "x" off-site material streams treated by process.

n=Total number of "y" off-site material streams treated by process.

Q_x =Total mass quantity of off-site material stream "x", kg/yr.

Q_y =Total mass quantity of off-site material stream "y", kg/yr.

$\bar{C}_x$ =VOHAP concentration of off-site material stream "x" at the point-of-delivery, ppmw.

(e) Determination of required HAP mass removal rate (RMR).

(1) Each individual stream containing HAP that enters the treatment process shall be identified.

(2) The average VOHAP concentration at the point-of-delivery for each stream identified in paragraph (e)(1) of this section shall be determined using the test methods and procedures specified in paragraph (b) of this section.

(3) For each stream identified in paragraph (e)(1) of this section that has an average VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery, the average volumetric flow rate and the density of the off-site material stream at the point-of-delivery shall be determined.

(4) The required HAP mass removal rate (RMR) shall be calculated by using the average VOHAP concentration, average volumetric flow rate, and density determined in paragraph (e)(3) of this section for each stream and the following equation:

$$RMR = \sum_{y=1}^{n} \left[V_y \times k_y \times \frac{\left(\overline{C_y} - 500\ \text{ppmw} \right)}{10^6} \right]$$

Where:

RMR = Required HAP mass removal rate, kg/hr.

y = Individual stream "y" that has a VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery as determined in § 63.694(b).

n = Total number of "y" streams treated by process.

V_y = Average volumetric flow rate of stream "y" at the point-of-delivery, m^3 /hr.

k_y = Density of stream "y", kg/m^3 .

$\overline{C_y}$ = Average VOHAP concentration of stream "y" at the point-of-delivery as determined in § 63.694(b)(2), ppmw.

(f) Determination of actual HAP mass removal rate (MR).

(1) The actual HAP mass removal rate (MR) shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(2) The HAP mass flow entering the process (E_b) and the HAP mass flow exiting the process (E_a) shall be determined using the test methods and procedures specified in paragraphs (g)(2) through (g)(4) of this section.

(3) The actual mass removal rate shall be calculated using the HAP mass flow rates determined in paragraph (f)(2) of this section and the following equation:

$MR = E_b - E_a$

where:

MR = Actual HAP mass removal rate, kg/hr.

E_b = HAP mass flow entering process as determined in paragraph (f)(2) of this section, kg/hr.

E_a = HAP mass flow exiting process as determined in paragraph (f)(2) of this section, kg/hr.

(g) Determination of treatment process HAP reduction efficiency (R).

(1) The HAP reduction efficiency (R) for a treatment process shall be determined based on results for a minimum of three consecutive runs.

(2) Each individual stream containing HAP that enters the treatment process shall be identified. Each individual stream containing HAP that exits the treatment process shall be identified. The owner or operator shall prepare a

sampling plan for measuring the identified streams that accurately reflects the retention time of the material in the process.

(3) For each run, information shall be determined for each stream identified in paragraph (g)(2) of this section as specified in paragraphs (g)(3)(i) through (g)(3)(iii) of this section.

(i) The mass quantity shall be determined for each stream identified in paragraph (g)(2) of this section as entering the process (Q_b). The mass quantity shall be determined for each stream identified in paragraph (g)(2) of this section as exiting the process (Q_a).

(ii) The average VOHAP concentration at the point-of-delivery shall be determined for each stream entering the process (C_b) (as identified in paragraph (g)(2) of this section) using the test methods and procedures specified in paragraph (b) of this section.

(iii) The average VOHAP concentration at the point-of-treatment shall be determined for each stream exiting the process (C_a) (as identified in paragraph (g)(2) of this section) using the test methods and procedures specified in paragraph (c) of this section.

(4) The HAP mass flow entering the process (E_b) and the HAP mass flow exiting the process (E_a) shall be calculated using the results determined in paragraph (g)(3) of this section and the following equations:

$$E_a = \frac{1}{10^6}\sum_{j=1}^{m}\left(Q_{aj} \times \overline{C_{aj}}\right)$$

$$E_b = \frac{1}{10^6}\sum_{j=1}^{m}\left(Q_{bj} \times \overline{C_{bj}}\right)$$

Where:

E_b = HAP mass flow entering process, kg/hr.

E_a = HAP mass flow exiting process, kg/hr.

m = Total number of runs (at least 3)

j = Individual run “j”

Q_{bj} = Mass quantity of material entering process during run “j”, kg/hr.

Q_{aj} = Average mass quantity of material exiting process during run “j”, kg/hr.

C_{aj} = Average VOHAP concentration of material exiting process during run “j” as determined in § 63.694(c), ppmw.

C_{bj} = Average VOHAP concentration of material entering process during run “j” as determined in § 63.694(b)(2), ppmw.

(5) The HAP reduction efficiency (R) shall be calculated using the HAP mass flow rates determined in paragraph (g)(4) of this section and the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

Where:

R = HAP reduction efficiency, percent.

E_b = HAP mass flow entering process as determined in paragraph (g)(4) of this section, kg/hr.

E_a = HAP mass flow exiting process as determined in accordance with the requirements of paragraph (g)(4) of this section, kg/hr.

(h) Determination of HAP biodegradation efficiency (R_{bio}).

(1) The fraction of HAP biodegraded (F_{bio}) shall be determined using one of the procedures specified in appendix C of this part 63.

(2) The HAP biodegradation efficiency (R_{bio}) shall be calculated by using the following equation:

$R_{bio} - F_{bio} \times 100$

where:

R_{bio} = HAP biodegradation efficiency, percent.

F_{bio} = Fraction of HAP biodegraded as determined in paragraph (h)(1) of this section.

(i) Determination of actual HAP mass removal rate (MR_{bio}).

(1) The actual HAP mass removal rate (MR_{bio}) shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(2) The HAP mass flow entering the process (E_b) shall be determined using the test methods and procedures specified in paragraphs (g)(2) through (g)(4) of this section.

(3) The fraction of HAP biodegraded (F_{bio}) shall be determined using the procedure specified in 40 CFR part 63, appendix C of this part.

(4) The actual mass removal rate shall be calculated by using the HAP mass flow rates and fraction of HAP biodegraded determined in paragraphs (i)(2) and (i)(3), respectively, of this section and the following equation:

$MR_{bio} = E^b \times F_{bio}$

Where:

MR_{bio} = Actual HAP mass removal rate, kg/hr.

E_b = HAP mass flow entering process, kg/hr.

F_{bio} = Fraction of HAP biodegraded.

(j) *Determination of maximum HAP vapor pressure for off-site material in a tank.* (1) The maximum HAP vapor pressure of the off-site material composition managed in a tank shall be determined using either direct measurement as specified in paragraph (j)(2) of this section or by knowledge of the off-site material as specified by paragraph (j)(3) of this section.

(2) Direct measurement to determine the maximum HAP vapor pressure of an off-site material.

(i) Sampling. A sufficient number of samples shall be collected to be representative of the off-site material contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material is collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the plant site operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 or Method 25D in 40 CFR part 60, appendix A.

(ii) Analysis. Any one of the following methods may be used to analyze the samples and compute the maximum HAP vapor pressure of the off-site material:

(A) Method 25E in 40 CFR part 60 appendix A;

(B) Methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss from External Floating Roof Tanks,";

(C) Methods obtained from standard reference texts;

(D) ASTM Method 2879-83; or

(E) Any other method approved by the Administrator.

(3) Use of knowledge to determine the maximum HAP vapor pressure of the off-site material. Documentation shall be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum HAP vapor pressure of the off-site material is less than the maximum vapor pressure limit listed in Table 3 or Table 4 of this subpart for the applicable tank design capacity category. Examples of information that may be used include: the off-site material is generated by a process for which at other locations it previously has been determined by direct measurement that the off-site material maximum HAP vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

(k) Procedure for determining no detectable organic emissions for the purpose of complying with this subpart.

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the unit contains a material having a total organic concentration representative of the range of concentrations for the materials expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.

(3) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the material placed in the unit, not for each individual organic constituent.

(4) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(5) Calibration gases shall be as follows:

(i) Zero air (less than 10 ppmv hydrocarbon in air); and

(ii) A mixture of methane or n-hexane in air at a concentration of approximately, but less than, 10,000 ppmv.

(6) An owner or operator may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If an owner or operator chooses to adjust the instrument readings for the background level, the background level value must be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) An owner or operator must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in paragraph (k)(8)(i) or (k)(8)(ii) of this section.

(i) If an owner or operator chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in paragraph (k)(9) of this section.

(ii) If an owner or operator chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in paragraph (k)(6) of this section is compared with the applicable value for the potential leak interface as specified in paragraph (k)(9) of this section.

(9) A potential leak interface is determined to operate with no detectable emissions using the applicable criteria specified in paragraphs (k)(9)(i) and (k)(9)(ii) of this section.

(i) For a potential leak interface other than a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in paragraph (k)(8) is less than 500 ppmv.

(ii) For a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in paragraph (k)(8) is less than 10,000 ppmv.

(l) Control device performance test procedures.

(1) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites at the inlet and outlet of the control device.

(i) To determine compliance with a control device percent reduction requirement, sampling sites shall be located at the inlet of the control device as specified in paragraphs (l)(1)(i)(A) and (l)(1)(i)(B) of this section, and at the outlet of the control device.

(A) The control device inlet sampling site shall be located after the final product recovery device.

(B) If a vent stream is introduced with the combustion air or as an auxiliary fuel into a boiler or process heater, the location of the inlet sampling sites shall be selected to ensure that the measurement of total HAP concentration or TOC concentration, as applicable, includes all vent streams and primary and secondary fuels introduced into the boiler or process heater.

(ii) To determine compliance with an enclosed combustion device concentration limit, the sampling site shall be located at the outlet of the device.

(2) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(3) To determine compliance with the control device percent reduction requirement, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A of this chapter; alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 in 40 CFR part 63, appendix A of this part may be used. The following procedures shall be used to calculate percent reduction efficiency:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time such as 15 minute intervals during the run.

(ii) The mass rate of either TOC (minus methane and ethane) or total HAP (E_i and E_o ,respectively) shall be computed.

(A) The following equations shall be used:

$$E_i = K_2 \times Q_i \times \sum_{j=1}^{n} \left(C_{ij} \times M_{ij} \right)$$

$$E_o = K_2 \times Q_o \times \sum_{j=1}^{n} \left(C_{oj} \times M_{oj} \right)$$

Where:

C_{ij} , C_{oj} = Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

E_i , E_o = Mass rate of TOC (minus methane and ethane) or total HAP at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

M_{ij} , M_{oj} = Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

Q_i , Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

K_2 = Constant, 2.494×10^{-6} (parts per million) $^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

(B) When the TOC mass rate is calculated, all organic compounds (minus methane and ethane) measured by Method 18 of 40 CFR part 60, appendix A shall be summed using the equation in paragraph (I)(3)(ii)(A) of this section.

(C) When the total HAP mass rate is calculated, only the HAP constituents shall be summed using the equation in paragraph (I)(3)(ii)(A) of this section.

(iii) The percent reduction in TOC (minus methane and ethane) or total HAP shall be calculated as follows:

$$R_{cd} = \frac{E_i - E_o}{E_i} \times 100$$

where:

R_{cd} =Control efficiency of control device, percent.

E_i =Mass rate of TOC (minus methane and ethane) or total HAP at the inlet to the control device as calculated under paragraph (l)(3)(ii) of this section, kilograms TOC per hour or kilograms HAP per hour.

E_o =Mass rate of TOC (minus methane and ethane) or total HAP at the outlet of the control device, as calculated under paragraph (l)(3)(ii) of this section, kilograms TOC per hour or kilograms HAP per hour.

(iv) If the vent stream entering a boiler or process heater is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total HAP or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total HAP in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total HAP exiting the device, respectively.

(4) To determine compliance with the enclosed combustion device total HAP concentration limit of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A to measure either TOC (minus methane and ethane) or total HAP. Alternatively, any other method or data that has been validated according to Method 301 in appendix A of this part, may be used. The following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(ii) The TOC concentration or total HAP concentration shall be calculated according to paragraph (m)(4)(ii)(A) or (m)(4)(ii)(B) of this section.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{i=1}^{x} \frac{\sum_{j=1}^{n} C_{ji}}{x}$$

where:

C_{TOC} =Concentration of total organic compounds minus methane and ethane, dry basis, parts per million by volume.

C_{ji} =Concentration of sample components j of sample i, dry basis, parts per million by volume.

n=Number of components in the sample.

x=Number of samples in the sample run.

(B) The total HAP concentration (C_{HAP}) shall be computed according to the equation in paragraph (l)(4)(ii)(A) of this section except that only HAP constituents shall be summed.

(iii) The measured TOC concentration or total HAP concentration shall be corrected to 3 percent oxygen as follows:

(A) The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration ($\%O_{2dry}$). The samples shall be collected during the same time that the samples are collected for determining TOC concentration or total HAP concentration.

(B) The concentration corrected to 3 percent oxygen (C_c) shall be computed using the following equation:

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2dry}} \right)$$

where:

C_c =TOC concentration or total HAP concentration corrected to 3 percent oxygen, dry basis, parts per million by volume.

C_m =Measured TOC concentration or total HAP concentration, dry basis, parts per million by volume.

$\%O_{2dry}$ =Concentration of oxygen, dry basis, percent by volume.

(m) Determination of process vent stream flow rate and total HAP concentration.

(1) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, must be used for selection of the sampling site.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(3) Process vent stream gas volumetric flow rate must be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(4) Process vent stream total HAP concentration must be measured using the following procedures:

(i) Method 18 of 40 CFR part 60, appendix A, must be used to measure the total HAP concentration. Alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used.

(ii) Where Method 18 of 40 CFR part 60, appendix A, is used, the following procedures must be used to calculate parts per million by volume concentration:

(A) The minimum sampling time for each run must be 1 hour in which either an integrated sample or four grab samples must be taken. If grab sampling is used, then the samples must be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(B) The total HAP concentration (CHAP) must be computed according to the following equation:

$$C_{HAP} = \frac{\sum_{i=1}^{x} \left(\sum_{j=1}^{n} C_{ji} \right)}{X}$$

Where:

C_{HAP} = Total concentration of HAP compounds listed in Table 1 of this subpart, dry basis, parts per million by volume.

C_{ji} = Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38974, July 20, 1999; 66 FR 1267, Jan. 8, 2001]

§ 63.695 Inspection and monitoring requirements.

(a) This section specifies the inspection and monitoring procedures required to perform the following:

(1) To inspect tank fixed roofs and floating roofs for compliance with the Tank Level 2 controls standards specified in § 63.685 of this subpart, the inspection procedures are specified in paragraph (b) of this section.

(2) To inspect and monitor closed-vent systems for compliance with the standards specified in § 63.693 of this subpart, the inspection and monitoring procedures are specified in paragraph (c) of this section.

(3) To inspect and monitor transfer system covers for compliance with the standards specified in § 63.689(c)(1) of this subpart, the inspection and monitoring procedures are specified in paragraph (d) of this section.

(4) To monitor and record off-site material treatment processes for compliance with the standards specified in 63.684(e), the monitoring procedures are specified in paragraph (e) of this section.

(b) Tank Level 2 fixed roof and floating roof inspection requirements.

(1) Owners and operators that use a tank equipped with an internal floating roof in accordance with the provisions of § 63.685(e) of this subpart shall meet the following inspection requirements:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, the internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the waste surfaces from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The owner or operator shall inspect the internal floating roof components as follows except as provided for in paragraph (b)(1)(iii) of this section:

(A) Visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every calendar year after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 10 years. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(iii) As an alternative to performing the inspections specified in paragraph (b)(1)(ii) of this section for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 5 years. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(2) Owners and operators that use a tank equipped with an external floating roof in accordance with the provisions of § 63.685(f) of this subpart shall meet the following requirements:

(i) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(B) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 days after initial operation of the separator following installation of the floating roof and, thereafter, at least once every year. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(C) If a tank ceases to hold off-site material for a period of 1 year or more, subsequent introduction of off-site material into the tank shall be considered an initial operation for the purposes of paragraphs (b)(2)(i)(A) and (b)(2)(i)(B) of this section.

(D) The owner shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure.

(*1*) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.

(*2*) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) ($\frac{1}{8}$ -inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

(*3*) For a seal gap measured under paragraph (b)(2) of this section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(*4*) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in § 63.685(f)(1) of this subpart.

(E) In the event that the seal gap measurements do not conform to the specifications in § 63.685(f)(1) of this subpart, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(F) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(ii) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The owner or operator shall perform the inspections following installation of the external floating roof and, thereafter, at least once every year.

(C) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(D) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696(d) of this subpart.

(3) Owners and operators that use a tank equipped with a fixed roof in accordance with the provisions of § 63.685(g) of this subpart shall meet the following requirements:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case when a tank is buried partially or entirely underground, inspection is required only for those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.

(ii) The owner or operator must perform an initial inspection following installation of the fixed roof. Thereafter, the owner or operator must perform the inspections at least once every calendar year except as provided for in paragraph (f) of this section.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696(e) of this subpart.

(4) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (b)(1), (b)(2), or (b)(3) of this section in the following manner:

(i) The owner or operator shall within 45 calendar days of detecting the defect either repair the defect or empty the tank and remove it from service. If within this 45-day period the defect cannot be repaired or the tank cannot be removed from service without disrupting operations at the plant site, the owner or operator is allowed two 30-day extensions. In cases when an owner or operator elects to use a 30-day extension, the owner or operator shall prepare and maintain documentation describing the defect, explaining why alternative storage capacity is not available, and specify a schedule of actions that will ensure that the control equipment will be repaired or the tank emptied as soon as possible.

(ii) When a defect is detected during an inspection of a tank that has been emptied and degassed, the owner or operator shall repair the defect before refilling the tank.

(c) Owners and operators that use a closed-vent system in accordance with the provisions of § 63.693 of this subpart shall meet the following inspection and monitoring requirements:

(1) Each closed-vent system that is used to comply with § 63.693(c)(1)(i) of this subpart shall be inspected and monitored in accordance with the following requirements:

(i) At initial startup, the owner or operator shall monitor the closed-vent system components and connections using the procedures specified in § 63.694(k) of this subpart to demonstrate that the closed-vent system operates with no detectable organic emissions.

(ii) After initial startup, the owner or operator shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air emissions. The owner or operator shall monitor a component or connection using the procedures specified in § 63.694(k) of this subpart to demonstrate that it operates with no detectable organic emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

(B) Closed-vent system components or connections other than those specified in paragraph (c)(1)(ii)(A) of this section, shall be monitored at least once per year using the procedures specified in § 63.694(k) of this subpart to demonstrate that components or connections operate with no detectable organic emissions.

(C) The continuous monitoring system required by § 63.693(b)(4)(i) shall monitor and record either an instantaneous data value at least once every 15 minutes or an average value for intervals of 15 minutes or less.

(D) The owner or operator shall visually inspect the seal or closure mechanism required by § 63.693(c)(2)(ii) at least once every month to verify that the bypass mechanism is maintained in the closed position.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of paragraph (c)(3) of this section.

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in § 63.696 of this subpart.

(2) Each closed-vent system that is used to comply with § 63.693(c)(1)(ii) of this subpart shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping; loose connections; or broken or missing caps or other closure devices.

(ii) The owner or operator must perform an initial inspection following installation of the closed-vent system. Thereafter, the owner or operator must perform the inspections at least once every calendar year except as provided for in paragraph (f) of this section.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c)(3) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(3) The owner or operator shall repair all detected defects as follows:

(i) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection.

(ii) Repair of a defect may be delayed beyond 45 calendar days if either of the conditions specified in paragraph (c)(3)(ii)(A) or (c)(3)(ii)(B) occurs. In this case, the owner or operator must repair the defect the next time the process or unit that vents to the closed-vent system is shutdown. Repair of the defect must be completed before the process or unit resumes operation.

(A) Completion of the repair is technically infeasible without the shutdown of the process or unit that vents to the closed-vent system.

(B) The owner or operator determines that the air emissions resulting from the repair of the defect within the specified period would be greater than the fugitive emissions likely to result by delaying the repair until the next time the process or unit that vents to the closed-vent system is shutdown.

(iii) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.696 of this subpart.

(d) Owners and operators that use a transfer system equipped with a cover in accordance with the provisions of § 63.689(c)(1) of this subpart shall meet the following inspection requirements:

(1) The cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover sections or between the cover and its mounting; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case when a transfer system is buried partially or entirely underground, inspection is required only for those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., access hatches, etc.) and can be opened to the atmosphere.

(2) The owner or operator must perform an initial inspection following installation of the cover. Thereafter, the owner or operator must perform the inspections at least once every calendar year except as provided for in paragraph (f) of this section.

(3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d)(5) of this section.

(4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(5) The owner or operator shall repair all detected defects as follows:

(i) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (d)(5)(ii) of this section.

(ii) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the transfer system and no alternative transfer system is available at the site to accept the material normally handled by the system. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the material handled by the transfer system stops operation. Repair of the defect must be completed before the process or unit resumes operation.

(iii) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.696 of this subpart.

(e) *Control device monitoring requirements.* For each control device required under § 63.693 of this subpart to be monitored in accordance with the provisions of this paragraph (e), the owner or operator must ensure that each control device operates properly by monitoring the control device in accordance with the requirements specified in paragraphs (e)(1) through (e)(7) of this section.

(1) A continuous parameter monitoring system must be used to measure the operating parameter or parameters specified for the control device in § 63.693(d) through § 63.693(g) of this subpart as applicable to the type and design of the control device. The continuous parameter monitoring system must meet the following specifications and requirements:

(i) The continuous parameter monitoring system must measure either an instantaneous value at least once every 15 minutes or an average value for intervals of 15 minutes or less and continuously record either:

(A) Each measured data value; or

(B) Each block average value for each 1-hour period or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.

(ii) The monitoring system must be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications or other written procedures that provide reasonable assurance that the monitoring equipment is operating properly.

(2) Using the data recorded by the monitoring system, the owner or operator must calculate the daily average value for each monitored operating parameter for each operating day. If operation of the control device is continuous, the operating day is a 24-hour period. If control device operation is not continuous, the operating day is the total number of hours of control device operation per 24-hour period. Valid data points must be available for 75 percent of the operating hours in an operating day to compute the daily average.

(3) For each monitored operating parameter, the owner or operator must establish a minimum operating parameter value or a maximum operating parameter value, as appropriate, to define the range of conditions at which the control device must be operated to continuously achieve the applicable performance requirements specified in § 63.693(b)(2) of this subpart. Each minimum or maximum operating parameter value must be established in accordance with the requirements in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) If the owner or operator conducts a performance test to demonstrate control device performance, then the minimum or maximum operating parameter value must be established based on values measured during the performance test and supplemented, as necessary, by the control device design specifications, manufacturer recommendations, or other applicable information.

(ii) If the owner or operator uses a control device design analysis to demonstrate control device performance, then the minimum or maximum operating parameter value must be established based on the control device design analysis and supplemented, as necessary, by the control device manufacturer recommendations or other applicable information.

(4) An excursion for a given control device is determined to have occurred when the monitoring data or lack of monitoring data result in any one of the criteria specified in paragraphs (e)(4)(i) through (e)(4)(iii) of this section being met. When multiple operating parameters are monitored for the same control device and during the same operating day more than one of these operating parameters meets an excursion criterion specified in paragraphs (e)(4)(i) through (e)(4)(iii) of this section, then a single excursion is determined to have occurred for the control device for that operating day.

(i) An excursion occurs when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit) established for the operating parameter in accordance with the requirements of paragraph (e)(3) of this section.

(ii) An excursion occurs when the period of control device operation is 4 hours or greater in an operating day and the monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours. Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour.

(iii) An excursion occurs when the period of control device operation is less than 4 hours in an operating day and more than 1 of the hours during the period does not constitute a valid hour of data due to insufficient monitoring data. Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour.

(5) For each excursion, except as provided for in paragraph (e)(6) of this section, the owner or operator shall be deemed to have failed to have applied control in a manner that achieves the required operating parameter limits. Failure to achieve the required operating parameter limits is a violation of this standard.

(6) An excursion is not a violation of this standard under any one of the conditions specified in paragraphs (e)(6)(i) and (e)(6)(ii) of this section.

(i) An excursion is not a violation nor does it count toward the number of excused excursions allowed under paragraph (e)(6)(ii) of this section when the excursion occurs during any one of the following periods:

(A) During a period of startup, shutdown, or malfunction when the affected facility is operated during such period in accordance with § 63.6(e)(1); or

(B) During periods of non-operation of the unit or the process that is vented to the control device (resulting in cessation of HAP emissions to which the monitoring applies).

(ii) For each control device, one excused excursion is allowed per semiannual period for any reason. The initial semiannual period is the 6-month reporting period addressed by the first semiannual report submitted by the owner or operator in accordance with § 63.697(b)(4) of this subpart.

(7) Nothing in paragraphs (e)(1) through (e)(6) of this section shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of this subpart.

(f) *Alternative inspection and monitoring interval.* Following the initial inspection and monitoring of a piece of air pollution control equipment in accordance with the applicable provisions of this section, subsequent inspection and monitoring of the equipment may be performed at intervals longer than 1 year when an owner or operator determines that performing the required inspection or monitoring procedures would expose a worker to dangerous, hazardous, or otherwise unsafe conditions and the owner or operator complies with the requirements specified in paragraphs (f)(1) and (f)(2) of this section.

(1) The owner or operator must prepare and maintain at the plant site written documentation identifying the specific air pollution control equipment designated as "unsafe to inspect and monitor." The documentation must include for each piece of air pollution control equipment designated as such a written explanation of the reasons why the equipment is unsafe to inspect or monitor using the applicable procedures under this section.

(2) The owner or operator must develop and implement a written plan and schedule to inspect and monitor the air pollution control equipment using the applicable procedures specified in this section during times when a worker can safely access the air pollution control equipment. The required inspections and monitoring must be performed as frequently as practicable but do not need to be performed more frequently than the periodic schedule that would be otherwise applicable to the air pollution control equipment under the provisions of this section. A copy of the written plan and schedule must be maintained at the plant site.

[64 FR 38977, July 20, 1999, as amended at 68 FR 37352, June 23, 2003; 71 FR 20457, Apr. 20, 2006]

§ 63.696 Recordkeeping requirements.

(a) The owner or operator subject to this subpart shall comply with the recordkeeping requirements in § 63.10 under 40 CFR 63 subpart A—General Provisions that are applicable to this subpart as specified in Table 2 of this subpart.

(b) The owner or operator of a control device subject to this subpart shall maintain the records in accordance with the requirements of 40 CFR 63.10 of this part.

(c) [Reserved]

(d) Each owner or operator using an internal floating roof to comply with the tank control requirements specified in § 63.685(e) of this subpart or using an external floating roof to comply with the tank control requirements specified in § 63.685(f) of this subpart shall prepare and maintain the following records:

(1) Documentation describing the floating roof design and the dimensions of the tank.

(2) A record for each inspection required by § 63.695(b) of this subpart, as applicable to the tank, that includes the following information: a tank identification number (or other unique identification description as selected by the owner or operator) and the date of inspection.

(3) The owner or operator shall record for each defect detected during inspections required by § 63.695(b) of this subpart the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.695(b)(4) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(4) Owners and operators that use a tank equipped with an external floating roof in accordance with the provisions of § 63.685(f) of this subpart shall prepare and maintain records for each seal gap inspection required by § 63.695(b) describing the results of the seal gap measurements. The records shall include the date of that the measurements

are performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in § 63.695(b) of this subpart, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the separator was emptied, if necessary.

(e) Each owner or operator using a fixed roof to comply with the tank control requirements specified in § 63.685(g) of this subpart shall prepare and maintain the following records:

(1) A record for each inspection required by § 63.695(b) of this subpart, as applicable to the tank, that includes the following information: a tank identification number (or other unique identification description as selected by the owner or operator) and the date of inspection.

(2) The owner or operator shall record for each defect detected during inspections required by § 63.695(b) of this subpart the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.695(b)(4) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(f) Each owner or operator using an enclosure to comply with the tank control requirements specified in § 63.685(i) of this subpart shall prepare and maintain records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(g) An owner or operator shall record, on a semiannual basis, the information specified in paragraphs (g)(1) and (g)(2) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of § 63.693(d) through (h) of this subpart, as applicable.

(1) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(2) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during these 6 months that the control device did not meet the requirement of § 63.693 (d) through (h) of this subpart, as applicable, due to planned routine maintenance.

(h) An owner or operator shall record the information specified in paragraphs (h)(1) through (h)(3) of this section for those unexpected control device system malfunctions that would require the control device not to meet the requirements of § 63.693 (d) through (h) of this subpart, as applicable.

(1) The occurrence and duration of each malfunction of the control device system.

(2) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(3) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

§ 63.697 Reporting requirements.

(a) Each owner or operator of an affected source subject to this subpart must comply with the notification requirements specified in paragraph (a)(1) of this section and the reporting requirements specified in paragraph (a)(2) of this section.

(1) The owner or operator of an affected source must submit notices to the Administrator in accordance with the applicable notification requirements in 40 CFR 63.9 as specified in Table 2 of this subpart. For the purpose of this subpart, an owner or operator subject to the initial notification requirements under 40 CFR 63.9(b)(2) must submit the required notification on or before October 19, 1999.

(2) The owner or operator of an affected source must submit reports to the Administrator in accordance with the applicable reporting requirements in 40 CFR 63.10 as specified in Table 2 of this subpart.

(b) The owner or operator of a control device used to meet the requirements of § 63.693 of this subpart shall submit the following notifications and reports to the Administrator:

(1) A Notification of Performance Tests specified in § 63.7 and § 63.9(g) of this part,

(2) Performance test reports specified in § 63.10(d)(2) of this part, and

(3) Startup, shutdown, and malfunction reports specified in § 63.10(d)(5) of this part.

(i) If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in § 63.6(e)(3) of this part, the owner or operator shall state such information in the report. The startup, shutdown, or malfunction report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator, and

(ii) Separate startup, shutdown, or malfunction reports are not required if the information is included in the summary report specified in paragraph (b)(4) of this section.

(4) A summary report specified in § 63.10(e)(3) of this part shall be submitted on a semiannual basis (i.e., once every 6-month period). The summary report must include a description of all excursions as defined in § 63.695(e) of this subpart that have occurred during the 6-month reporting period. For each excursion caused when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit), the report must include the daily average values of the monitored parameter, the applicable operating parameter limit, and the date and duration of the period that the exceedance occurred. For each excursion caused by lack of monitoring data, the report must include the date and duration of period when the monitoring data were not collected and the reason why the data were not collected.

(c) Each owner or operator using an internal floating roof or external floating roof to comply with the Tank Level 2 control requirements specified in § 63.685(d) of this subpart shall notify the Administrator in advance of each inspection required under § 63.695(b) of this subpart to provide the Administrator with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Administrator of the date and location of the inspection as follows:

(1) Prior to each inspection to measure external floating roof seal gaps as required under § 63.695(b) of this subpart, written notification shall be prepared and sent by the owner or operator so that it is received by the Administrator at least 30 calendar days before the date the measurements are scheduled to be performed.

(2) Prior to each visual inspection of an internal floating roof or external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Administrator at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (c)(3) of this section.

(3) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Administrator as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Administrator at least 7 calendar days before refilling the tank.

[61 FR 34158, July 1, 1996, as amended at 64 FR 38981, July 20, 1999]

§ 63.698 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§ 63.680, 63.683 through 63.691, and 63.693. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

[68 FR 37352, June 23, 2003]

Table 1 to Subpart DD of Part 63—List of Hazardous Air Pollutants (HAP) for Subpart DD

CAS No. [a]	Chemical name	f_m305
75-07-0	Acetaldehyde	1.000
75-05-8	Acetonitrile	0.989
98-86-2	Acetophenone	0.314
107-02-8	Acrolein	1.000
107-13-1	Acrylonitrile	0.999
107-05-1	Allyl chloride	1.000
71-43-2	Benzene (includes benzene in gasoline)	1.000
98-07-7	Benzotrichloride (isomers and mixture)	0.958
100-44-7	Benzyl chloride	1.000
92-52-4	Biphenyl	0.864
542-88-1	Bis(chloromethyl)ether [b]	0.999
75-25-2	Bromoform	0.998
106-99-0	1,3-Butadiene	1.000
75-15-0	Carbon disulfide	1.000
56-23-5	Carbon tetrachloride	1.000
43-58-1	Carbonyl sulfide	1.000
133-90-4	Chloramben	0.633

CAS No. [a]	Chemical name	f_m305
108-90-7	Chlorobenzene	1.000
67-66-3	Chloroform	1.000
107-30-2	Chloromethyl methyl ether [b]	1.000
126-99-8	Chloroprene	1.000
98-82-8	Cumene	1.000
94-75-7	2,4-D, salts and esters	0.167
334-88-3	Diazomethane [c]	0.999
132-64-9	Dibenzofurans	0.967
96-12-8	1,2-Dibromo-3-chloropropane	1.000
106-46-7	1,4-Dichlorobenzene(p)	1.000
107-06-2	Dichloroethane (Ethylene dichloride)	1.000
111-44-4	Dichloroethyl ether (Bis(2-chloroethyl ether)	0.757
542-75-6	1,3-Dichloropropene	1.000
79-44-7	Dimethyl carbamoyl chloride [c]	0.150
64-67-5	Diethyl sulfate	0.0025
77-78-1	Dimethyl sulfate	0.086
121-69-7	N,N-Dimethylaniline	0.0008
51-28-5	2,4-Dinitrophenol	0.0077
121-14-2	2,4-Dinitrotoluene	0.0848
123-91-1	1,4-Dioxane (1,4-Diethyleneoxide)	0.869
106-89-8	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	0.939
106-88-7	1,2-Epoxybutane	1.000
140-88-5	Ethyl acrylate	1.000
100-41-4	Ethyl benzene	1.000
75-00-3	Ethyl chloride (Chloroethane)	1.000
106-93-4	Ethylene dibromide (Dibromoethane)	0.999
107-06-2	Ethylene dichloride (1,2-Dichloroethane)	1.000
151-56-4	Ethylene imine (Aziridine)	0.867
75-21-8	Ethylene oxide	1.000
75-34-3	Ethylidene dichloride (1,1-Dichloroethane)	1.000
	Glycol ethers [d] that have a Henry's Law constant value equal to or greater than 0.1 Y/X (1.8×10^{-6} atm/gm-mole/m^3) at 25°C	(e)
118-74-1	Hexachlorobenzene	0.97
87-68-3	Hexachlorobutadiene	0.88
67-72-1	Hexachloroethane	0.499
110-54-3	Hexane	1.000
78-59-1	Isophorone	0.506
58-89-9	Lindane (all isomers)	1.000
67-56-1	Methanol	0.855
74-83-9	Methyl bromide (Bromomethane)	1.000
74-87-3	Methyl chloride (Choromethane)	1.000
71-55-6	Methyl chloroform (1,1,1-Trichloroethane)	1.000
78-93-3	Methyl ethyl ketone (2-Butanone)	0.990
74-88-4	Methyl iodide (Iodomethane)	1.0001

CAS No. [a]	Chemical name	f_m305
108-10-1	Methyl isobutyl ketone (Hexone)	0.9796
624-83-9	Methyl isocyanate	1.000
80-62-6	Methyl methacrylate	0.916
1634-04-4	Methyl tert butyl ether	1.000
75-09-2	Methylene chloride (Dichloromethane)	1.000
91-20-3	Naphthalene	0.994
98-95-3	Nitrobenzene	0.394
79-46-9	2-Nitropropane	0.989
82-68-8	Pentachloronitrobenzene (Quintobenzene)	0.839
87-86-5	Pentachlorophenol	0.0898
75-44-5	Phosgene [c]	1.000
123-38-6	Propionaldehyde	0.999
78-87-5	Propylene dichloride (1,2-Dichloropropane)	1.000
75-56-9	Propylene oxide	1.000
75-55-8	1,2-Propylenimine (2-Methyl aziridine)	0.945
100-42-5	Styrene	1.000
96-09-3	Styrene oxide	0.830
79-34-5	1,1,2,2-Tetrachloroethane	0.999
127-18-4	Tetrachloroethylene (Perchloroethylene)	1.000
108-88-3	Toluene	1.000
95-53-4	o-Toluidine	0.152
120-82-1	1,2,4-Trichlorobenzene	1.000
71-55-6	1,1,1-Trichloroethane (Methyl chlorform)	1.000
79-00-5	1,1,2-Trichloroethane (Vinyl trichloride)	1.000
79-01-6	Trichloroethylene	1.000
95-95-4	2,4,5-Trichlorophenol	0.108
88-06-2	2,4,6-Trichlorophenol	0.132
121-44-8	Triethylamine	1.000
540-84-1	2,2,4-Trimethylpentane	1.000
108-05-4	Vinyl acetate	1.000
593-60-2	Vinyl bromide	1.000
75-01-4	Vinyl chloride	1.000
75-35-4	Vinylidene chloride (1,1-Dichloroethylene)	1.000
1330-20-7	Xylenes (isomers and mixture)	1.000
95-47-6	o-Xylenes	1.000
108-38-3	m-Xylenes	1.000
106-42-3	p-Xylenes	1.000

Notes:

$f_{m\,305}$= Method 305 fraction measure factor.

a. CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

b. Denotes a HAP that hydrolyzes quickly in water, but the hydrolysis products are also HAP chemicals.

c. Denotes a HAP that may react violently with water, exercise caustic is an expected analyte.

d. Denotes a HAP that hydrolyzes slowly in water.

e. The $f_{m\,305}$factors for some of the more common glycol ethers can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.

[64 FR 38981, July 20, 1999]

Table 2 to Subpart DD of Part 63—Applicability of Paragraphs in Subpart A of This Part 63—General Provisions to Subpart DD

Subpart A reference	Applies to Subpart DD	Explanation
63.1(a)(1)	Yes	
63.1(a)(2)	Yes	
63.1(a)(3)	Yes	
63.1(a)(4)	No	Subpart DD (this table) specifies applicability of each paragraph in subpart A to subpart DD.
63.1(a)(5)-63.1(a)(9)	No	
63.1(a)(10)	Yes	
63.1(a)(11)	Yes	
63.1(a)(12)	Yes	
63.1(a)(13)	Yes	
63.1(a)(14)	Yes	
63.1(b)(1)	No	Subpart DD specifies its own applicability.
63.1(b)(2)	Yes	
63.1(b)(3)	No	
63.1(c)(1)	No	Subpart DD explicitly specifies requirements that apply.
63.1(c)(2)	No	Area sources are not subject to subpart DD.
63.1(c)(3)	No	
63.1(c)(4)	Yes	
63.1(c)(5)	Yes	Except that sources are not required to submit notifications overridden by this table.
63.1(d)	No	
63.1(e)	No	
63.2	Yes	§ 63.681 of subpart DD specifies that if the same term is defined in subparts A and DD, it shall have the meaning given in subpart DD.
63.3	Yes	
63.4(a)(1)-63.4(a)(3)	Yes	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	

Subpart A reference	Applies to Subpart DD	Explanation
63.5(a)(1)	Yes	Except replace term “source” and “stationary source” in § 63.5(a)(1) of subpart A with “affected source.”
63.5(a)(2)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes	
63.5(b)(4)	Yes	Except the cross-reference to § 63.9(b) is changed to § 63.9(b)(4) and (5). Subpart DD overrides § 63.9(b)(2) and (b)(3).
63.5(b)(5)	Yes	
63.5(b)(6)	Yes	
63.5(c)	No	Reserved.
63.5(d)(1)(i)	Yes	
63.5(d)(1)(ii)	Yes	
63.5(d)(1)(iii)	Yes	
63.5(d)(2)	No	
63.5(d)(3)	Yes	
63.5(d)(4)	Yes	
63.5(e)	Yes	
63.5(f)(1)	Yes	
63.5(f)(2)	Yes	
63.6(a)	Yes	
63.6(b)(1)	No	Subpart DD specifies compliance dates for sources subject to subpart DD.
63.6(b)(2)	No	
63.6(b)(3)	Yes	
63.6(b)(4)	No	May apply when standards are proposed under section 112(f) of the Clean Air Act.
63.6(b)(5)	No	§ 63.697 of subpart DD includes notification requirements.
63.6(b)(6)	No	
63.6(b)(7)	No	
63.6(c)(1)	No	§ 63.680 of subpart DD specifies the compliance date.
63.6(c)(2)-63.6(c)(4)	No	
63.6(c)(5)	Yes	
63.6(d)	No	
63.6(e)	Yes	
63.6(f)(1)	Yes	
63.6(f)(2)(i)	Yes	
63.6(f)(2)(ii)	Yes	Subpart DD specifies the use of monitoring data in determining compliance with subpart DD.
63.6(f)(2)(iii) (A), (B), and (C)	Yes	
63.6(f)(2)(iii) (D)	No	
63.6(f)(2)(iv)	Yes	
63.6(f)(2)(v)	Yes	
63.6(f)(3)	Yes	
63.6(g)	Yes	

Subpart A reference	Applies to Subpart DD	Explanation
63.6(h)	No	Subpart DD does not require opacity and visible emission standards.
63.6(i)	Yes	Except for § 63.6(i)(15), which is reserved.
63.6(j)	Yes	
63.7(a)(1)	No	Subpart DD specifies required testing and compliance demonstration procedures.
63.7(a)(2)	Yes	
63.7(a)(3)	Yes	
63.7(b)	No	
63.7(c)	No	
63.7(d)	Yes	
63.7(e)(1)	Yes	
63.7(e)(2)	Yes	
63.7(e)(3)	No	Subpart DD specifies test methods and procedures.
63.7(e)(4)	Yes	
63.7(f)	No	Subpart DD specifies applicable methods and provides alternatives.
63.7(g)	Yes	
63.7(h)(1)	Yes	
63.7(h)(2)	Yes	
63.7(h)(3)	Yes	
63.7(h)(4)	No	
63.7(h)(5)	Yes	
63.8(a)	No	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart DD specifies locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)(i)	Yes	
63.8(c)(1)(ii)	Yes	
63.8(c)(1)(iii)	Yes	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	Subpart DD specifies monitoring frequency
63.8(c)(5)-63.8(c)(8)	No	
63.8(d)	No	
63.8(e)	No	
63.8(f)(1)	Yes	
63.8(f)(2)	Yes	
63.8(f)(3)	Yes	
63.8(f)(4)(i)	Yes	
63.8(f)(4)(ii)	Yes	
63.8(f)(4)(iii)	No	
63.8(f)(5)(i)	Yes	
63.8(f)(5)(ii)	No	
63.8(f)(5)(iii)	Yes	
63.8(f)(6)	Yes	

Subpart A reference	Applies to Subpart DD	Explanation
63.8(g)	Yes	
63.9(a)	Yes	
63.9(b)(1)(i)	Yes	
63.9(b)(1)(ii)	No	
63.9(b)(2)	Yes	
63.9(b)(3)	No	
63.9(b)(4)	Yes	
63.9(b)(5)	Yes	
63.9(c)	Yes	
63.9(d)	Yes	
63.9(e)	No	
63.9(f)	No	
63.9(g)	No	
63.9(h)	Yes	
63.9(i)	Yes	
63.9(j)	No	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)(i)	Yes	
63.10(b)(2)(ii)	Yes	
63.10(b)(2)(iii)	No	
63.10(b)(2)(iv)	Yes	
63.10(b)(2)(v)	Yes	
63.10(b)(2)(vi)-(ix)	Yes	
63.10(b)(2)(x)-(xi)	Yes	
63.10(b)(2) (xii)-(xiv)	No	
63.10(b)(3)	Yes	
63.10(c)	No	
63.10(d)(1)	No	
63.10(d)(2)	Yes	
63.10(d)(3)	No	
63.10(d)(4)	Yes	
63.10(d)(5)(i)	Yes	
63.10(d)(5)(ii)	Yes	
63.10(e)	No	
63.10(f)	Yes	
63.11-63.15	Yes	

[a] Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

[64 FR 38983, July 20, 1999, as amended at 66 FR 1267, Jan. 8, 2001]

Table 3 to Subpart DD of Part 63—Tank Control Levels for Tanks at Existing Affected Sources as Required by 40 CFR 63.685(b)(1)

Tank design capacity (cubic meters)	Maximum HAP vapor pressure of off-site material managed in tank (kilopascals)	Tank control level
Design capacity less than 75 m^3	Maximum HAP vapor pressure less than 76.6 kPa	Level 1.
Design capacity equal to or greater than 75 $m^3$and less than 151 m^3	Maximum HAP vapor pressure less than 27.6 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 27.6 kPa	Level 2.
Design capacity equal to or greater than 151 m^3	Maximum HAP vapor pressures less than 5.2 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 5.2 kPa	Level 2.

Table 4 to Subpart DD of Part 63—Tank Control Levels for Tanks at New Affected Sources as Required by 40 CFR 63.685(b)(2)

Tank design capacity (cubic meters)	Maximum HAP vapor pressure of off-site material managed in tank (kilopascals)	Tank control level
Design capacity less than 38 m^3	Maximum HAP vapor pressure less than 76.6 kPa	Level 1.
Design capacity equal to or greater than 38 $m^3$and less than 151 m^3	Maximum HAP vapor pressure less than 13.1 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 13.1 kPa	Level 2.
Design capacity equal to or greater than 151 m^3	Maximum HAP vapor pressure less than 0.7 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 0.7 kPa	Level 2.

Attachment H

Part 70 Operating Permit No: T 089-29424-00345

[Downloaded from the eCFR on September 30, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

What This Subpart Covers

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for

engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

Emission Standards for Manufacturers

§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

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

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

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

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

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

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

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

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

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

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

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

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

(c) [Reserved]

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

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Other Requirements for Owners and Operators

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

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Compliance Requirements

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

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

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

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

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

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

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

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

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

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

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

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

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

such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

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

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

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

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

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

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

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

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

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

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

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Testing Requirements for Owners and Operators

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

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

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

Where:

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

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

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

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

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

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

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

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

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

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

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i = concentration of NO_X or PM at the control device inlet,

C_o = concentration of NO_X or PM at the control device outlet, and

R = percent reduction of NO_X or PM emissions.

(2) You must normalize the NO_X or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\,O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

$\%O_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

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

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_X concentration in ppm.

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 25 degrees Celsius.

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

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

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

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

Where:

ER = Emission rate in grams per KW-hour.

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

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

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

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

Notification, Reports, and Records for Owners and Operators

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

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

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

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

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

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

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

(ii) Maintenance conducted on the engine.

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

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

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

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

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

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

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

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

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

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

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

Special Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§60.4216 What requirements must I meet for engines used in Alaska?

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

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.

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

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

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

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

[76 FR 37971, June 28, 2011]

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

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

[76 FR 37972, June 28, 2011]

General Provisions

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

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

Definitions

§60.4219 What definitions apply to this subpart?

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

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

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

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

Date of manufacture means one of the following things:

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

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

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

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

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

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

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

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

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

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

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

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

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

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

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

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

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

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

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

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

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

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

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

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1]Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1]For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2]For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

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

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

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

Each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder	a. Reduce NO_X emissions by 90 percent or more;	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O_2 at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_X concentration.

Each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. Measure NO_X at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(3) Method 7E of 40 CFR part 60, Appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Each	Complying with the requirement to	You must	Using	According to the following requirements
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3.	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[79 FR 11251, Feb. 27, 2014]

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Attachment I

Part 70 Operating Permit No: T 089-29424-00345

[Downloaded from the eCFR on July 23, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

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

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

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

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad \text{(Eq. 1)}$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (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:

$$F_o = \frac{0.209\ F_d}{F_c} \quad \text{(Eq. 2)}$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq. 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

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

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

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

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

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

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

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

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O_2, dry basis.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
3. Stationary RICE	a. limit the concentra-tion of formalde-hyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the station-ary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formalde-hyde at the exhaust of the station-ary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the station-ary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[79 FR 11290, Feb. 27, 2014]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two

consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average "measurement data phase" CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) "Development of an Electrochemical Cell Emission Analyzer Test Protocol", Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers", EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) "ICAC Test Protocol for Periodic Monitoring", EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) "Code of Federal Regulations", Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____											
Run Type:	(_)				(_)			(_)			(_)
(X)	Pre-Sample Calibration				Stack Gas Sample			Post-Sample Cal. Check			Repeatability Check
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
"											
"											
"											
"											
Measurement Data Phase											
"											
"											
"											
"											
"											
"											
"											
"											
"											
"											
Mean											
Refresh Phase											
"											
"											
"											
"											

[78 FR 6721, Jan. 30, 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:	Tradebe Treatment and Recycling, LLC
Source Location:	4343 Kennedy Avenue, East Chicago, IN 46312
County:	Lake
SIC Code:	4953 (Refuse Systems)
Operation Permit No.:	T 089-29424-00345
Operation Permit Issuance Date:	February 25, 2011
Significant Source Modification No.:	089-34432-00345
Significant Permit Modification No.:	089-34503-00345
Permit Reviewer:	Heath Hartley

On December 30, 2014, the Office of Air Quality (OAQ) had a notice published in Post Tribune in Merrillville, Indiana and The Times in Munster, Indiana, Indiana, stating that Tradebe Treatment and Recycling, LLC had applied for a Significant Source Modification and Significant Permit Modification to construct and operate a new Solids Distillation System (SDS II). 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 January 26, 2015, Tradebe Treatment and Recycling, LLC submitted comments to IDEM, OAQ on the draft Significant Source Modification and Significant Permit Modification (See Tradebe Comments 1 through 4 below).

On January 29, 2015, David Case of the Environmental Technology Council (ETC) submitted comments to IDEM, OAQ on the draft Significant Source Modification and Significant Permit Modification (See ETC Comment 1 below).

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**.

Tradebe Comment 1:

Conditions D.1.9 - The following changes should be made to correct and clarify equations and terms used in this condition:

a. The equation to compute VOC emissions from the SDSII VRU, identified with the term V_{VRUII}, should be modified to remove the term V_F. The first part of the equation for V_{VRUII}, $[W*EF_{VRUII}*((100\%-CE_{F-CC})/100\%)]$, represents the means that one would compute emissions occurring from the flare that would be attributable to the SDSII unit. The term V_F is described as "Total VOC emissions created by flare FL1 per month (tons)", which is also VOC emissions occurring from the flare that would be attributable to the SDSII unit. The term V_F should be removed from this equation and removed from the list of variables defined following the equations.

b. The description for the term W should be modified to read "total weight of input material fed to the SDS II shredder per month (tons)" to distinguish this from the existing SDS unit.

c. The description for the variable EF_{SHS} should be changed to read "VOC uncontrolled emission factor for the SDS II solids handling system (lb/ton feed to the shredder)".

d. For the explanation of variables used in equations, there is a listing for the term W_{T85}. This should be U_{T85}

Response to Tradebe Comment 1:

a. IDEM agrees with the recommended changes. The controlled emissions calculated in the equation by the [$W*EF_{VRUII}*((100\%-CE_{F-CC})/100\%)$] would take into account any VOC emissions created by the flare. The permit has been revised as shown below.

b. IDEM agrees with the recommended changes. The permit has been revised as shown below:

c. IDEM agrees with the recommended changes. The permit has been revised as shown below:

d. IDEM agrees with the recommended changes. The permit has been revised as shown below:

D.1.9 VOC Emissions

Compliance with the VOC limit contained in Conditions D.1.1(c) and D.1.3(c) shall be determined using the following equations:

.....

$$V_{VRUII} = \left(W * EF_{VRUII} * \left(\frac{100\% - CE_{F-CC}}{100\%} \right) \cancel{+ V_F} \right)$$

.....

~~V_F = Total VOC emissions created by flare FL1 per month (tons);~~

.....

W = Total weight of input material fed to **the SDS II** shredder per month (tons);
EF_S = VOC uncontrolled emission factor for the SDS II shredder (lb/ton);
EF_{SHS} = VOC uncontrolled emission factor for the SDS II solids handling system (lb/ton **feed to the SDS II shredder**);

.....

~~W~~U_{T85} = VOC uncontrolled emissions for Tank 85 (ton/yr);

Tradebe Comment 2:

Condition D.1.10 – The equation refers to a term labeled V_F, which is described as "Total VOC emissions created by flare FL1 per month (tons)". The first part of the equation for V_{TOT}, [$W*EF_{VRU}*((100\%-CE_{F-CC})/100\%)$], represents the means that one would compute emissions occurring from the flare that would be attributable to the SDS unit. The term V_F also corresponds to VOC emissions occurring from the flare that would be attributable to the SDS unit. The term V_F should be removed from the equation and removed from the list of variables defined.

Response to Tradebe Comment 2:

IDEM agrees with the recommended changes. The controlled emissions calculated in the equation by the [$W*EF_{VRU}*((100\%-CE_{F-CC})/100\%)$] would take into account any VOC emissions created by the flare. The permit has been revised as shown below:

D.1.10 VOC Emissions

Compliance with the VOC limit contained in Condition D.1.1(b) and D.1.3(b) shall be determined as follows:

$$V_{TOT} = \sum_{m=1}^{12}\left[W * EF_{VRU} * \left(\frac{100\% - CE_{F-CC}}{100\%}\right) \cancel{+ V_F}\right]$$

.....

~~V_F = Total VOC emissions created by flare FL1 per month (tons);~~

Tradebe Comment 3:

Condition D.1.17(e)(3) – This condition requires that monthly records be maintained of the "flow rate to the flare as recorded by the flow meter", however it is not clear what compliance requirement these records are intended to correspond to or the frequency of measurement necessary to satisfy the requirement for monthly records. There does not appear to be any compliance requirements which require flow rate data in order to evaluate compliance. If this is correct, Tradebe believes that the requirement to maintain records from a flow meter is not necessary and should be removed from the permit.

Condition D.1.17(e)(8) – The wording for this record keeping requirement should be clarified by rewording it to read "maintain records of flare testing demonstrating compliance with the requirements of 40 CFR 60.18."

Response to Tradebe Comment 3:

IDEM agrees with the recommended changes. In addition, IDEM OAQ has determined that records of the date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the flare, and records of the date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the carbon adsorbers is also required. The permit has been revised as shown below:

D.1.17 Record Keeping Requirements

.....

(e) To document the compliance status with Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, D.1.10 and D.1.15, the Permittee shall maintain records in accordance with (1) through (~~9~~7) below. Records maintained for (1) through (~~9~~7) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limits and requirements established in Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, D.1.10 and D.1.15.

(1) A copy of the manufacturer's operation and maintenance manual that defines operating procedures that will ensure destruction efficiency;

(2) The design specifications for the flare, and make such records available upon request to IDEM, OAQ and the U.S. EPA;

(3) ~~Monthly records of flow rate to the flare as recorded by the flow meter, in either electronic or hard copy;~~

(~~4~~3) Date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the flare;

(~~5~~**4**) The Permittee shall maintain monthly records in either electronic or hard copy to demonstrate the thermocouple or equivalent device detects the presence of a flame no less than once per minute on the flare when either of the Vapor Recovery Units (VRU or VRU II) were in operation;

(~~6~~**5**) Measurements, engineering assessments, and calculations used to determine the monthly VOC emissions (before and after control) associated with each of the SDS and SDS II processes

(~~7~~**6**) The VOC emissions (after control) for each month and each compliance period for the SDS and the SDS II; and

(~~8~~**7**) ~~The results from the most recent valid stack test for flare FL1~~**Records of flare FL1 testing demonstrating compliance with the requirements of 40 CFR 60.18**.

(f) To document the compliance status with Condition D.1.16, the Permittee shall maintain records of the inspections required under Condition D.1.16. The Permittee shall also maintain the following records:

(1) The normal carbon bed changeout frequency and any supporting information, including, but not limited to, performance test data, monitoring data, the carbon bed adsorption capacity, and pollutant loading;

(2) Carbon adsorber monitoring data, pollutant breakthrough data; and

(3) Date(s) of carbon bed changeout/replacement.

(4) Date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the Carbon adsorber C18 and C38.

.....

Tradebe Comment 4:

Tradebe does not believe that 40 CFR Part 63, Subpart FFFF (Subpart FFFF) applies to its operations as indicated by Section E.6 of the proposed permits. Subpart FFFF applies to owners and operators of miscellaneous organic chemical manufacturing process units (MPCUs) as specified in 40 CFR 63.2435(a). According to 40 CFR 63.2435(b) an MPCU "produces material or family of material" that is described in (b)(1)(i) through (v). Only three of those could apply to Tradebe. 40 CFR 63.2435(b)(1)(i) and (ii) apply to units that produce organic chemicals. Tradebe is not an organic chemical manufacturer (in the applicable SICs or NAICS codes) because it does not manufacture the organic chemicals, it recovers them. Therefore, Tradebe does not fall in 40 CFR 63.2435(b)(1)(i) or (ii). Therefore, the only way those units could be MPCUs is if they satisfy 40 CFR 63.2435(b)(1)(v). That rule applies to organic solvents classified in (b)(1)(i) or (ii) "that are recovered using nondedicated solvent recovery operations." 40 CFR 63.2550 defines a nondedicated solvent recovery operation as "a distillation unit or other purification equipment that receives used solvent from more than one MPCU." Because a nondedicated solvent recovery operation has to receive used solvent from an MPCU, then nondedicated solvent recovery operations that receive used solvent from other types of operations (manufacturing facilities/generators that used the solvent - did not make it - and are sending it for cleaning) are covered by the rule. However, if one of the sources of the dirty solvent is an MPCU then the recovery unit is subject to the rule even though it is not located where the solvent was manufactured. See, 68 Fed. Reg. 63852 (at page 63859) (November 10, 2003). The preamble to the final rule also provides the following statement that further supports the fact that units subject to the rule are those than manufacture the specific chemical or clean up the dirty chemical generated by a unit that manufactures the chemical: "An MCPU includes a miscellaneous organic chemical manufacturing process, as defined in 40 CFR 63.2550, and must meet the following criteria: (1) It manufactures any material or family of materials described in 40 CFR 63.2435(b)(1); (2) it process, uses, or produces HAP described in 40 CFR 63.2435(b)(2); and,

except for certain process vents that are part of a chemical manufacturing process unit, as described in 40 CFR 63.100(j)(4), the MCPU is not part of an affected source under another subpart of 40 CFR part 63." 68 Fed. Reg. at 63854. Tradebe has reviewed its records and verified that it does not process any materials that originate from units that produce organic chemicals.

Response to Tradebe Comment 4:

Based on the information provided in Tradebe's comment, IDEM has reevaluated the applicability of 40 CFR 63, Subpart DD. It has been determined that the Distillation Unit, Thin Film Evaporator, and Pot Still are subject to the requirements of 40 CFR 63, Subpart DD. Pursuant to §63.2435(b)(3), a unit is not an affected source under 40 CFR 63, Subpart FFFF if it is subject to a another subpart of 40 CFR part 63. As specified by EPA in Section IV (Summary of Responses to Major Comments) of the final published rule for 40 CFR 63, Subpart FFFF, "offsite operations that are part of an affected source under another subpart of 40 CFR part 63, such as the Offsite Waste and Recovery Operations NESHAP (subpart DD), are not subject to subpart FFFF, as specified in § 63.2435(b)(3) of the final rule" (see 68 FR 63859 (Federal Register / Vol. 68, No. 217 / Monday, November 10, 2003). Finally, Tradebe's materials recovery operations fall under the Standard Industrial Classification (SIC) Code of 4953 (Refuse Systems) and the North American Industry Classification System (NAICS) Code of 562920 (Materials Recovery Facilities), which are not any of the SIC or NAICS Codes listed under 40 CFR 63.2435(b)(1) of 40 CFR 63, Subpart FFFF.

Note: Prior to this modification, the Distillation Unit, Thin Film Evaporator, and Pot Still were determined to be subject to the requirements of 40 CFR 63, Subpart DD (see Minor Permit Modification No. 089-34282-00345).

IDEM agrees with the recommended changes, and the requirements of 40 CFR 63, Subpart FFFF are removed from the permit 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) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart ~~FFFF~~**DD**, this unit is considered an affected facility.

.....

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart ~~FFFF~~**DD**, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart ~~FFFF~~**DD**, this unit is considered an affected facility.

.....

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart ~~FFFF~~**DD**, this unit is considered an affected facility.

.....

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart ~~FFFF~~**DD**, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart ~~FFFF~~**DD**, this unit is considered an affected facility.

.....

Note: This change is also made to the emission unit descriptions in Sections E.1 and E.2.

~~SECTION E.6 EMISSIONS UNIT OPERATION CONDITIONS~~

~~Emissions Unit Description:~~

~~(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.~~

~~Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.~~

~~(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.~~

~~Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.~~

~~(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.~~

~~Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.~~

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

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

~~E.6.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]~~

~~Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart FFFF.~~

~~E.6.2 Miscellaneous Organic Chemical Manufacturing NESHAP [40 CFR 63, Subpart FFFF] [326 IAC 20-84]~~

~~The Permittee shall comply with the following provisions of 40 CFR 63 Subpart FFFF (included as Attachment F to this permit), which are incorporated by reference as 326 IAC 20-84 for the Pot Still, Thin Film Evaporator and Distillation Unit:~~

~~(1) 40 CFR 63.2430~~
~~(2) 40 CFR 63.2435(a),(b),(d) and (e)~~
~~(3) 40 CFR 63.2440~~
~~(4) 40 CFR 63.2445(a)(2),(c),(d) and (f)~~
~~(5) 40 CFR 63.2450(a),(b),(c),(e),(g),(h),(l),(m) and (p)~~
~~(6) 40 CFR 63.2455(a) and (b)~~
~~(7) 40 CFR 63.2465~~
~~(8) 40 CFR 63.2470~~
~~(9) 40 CFR 63.2475~~
~~(10) 40 CFR 63.2480(a) and (b)~~
~~(11) 40 CFR 63.2505~~
~~(12) 40 CFR 63.2515~~
~~(13) 40 CFR 63.2520~~
~~(14) 40 CFR 63.2525(a)-(f)~~
~~(15) 40 CFR 63.2540~~
~~(16) 40 CFR 63.2545~~
~~(17) 40 CFR 63.2550~~
~~(18) Table 1~~
~~(19) Table 3~~
~~(20) Table 4~~
~~(21) Table 5~~
~~(22) Table 6~~
~~(23) Table 8~~
~~(24) Table 9~~
~~(25) Table 11~~
(26) ~~Table 12~~

SECTION E.~~7~~**6** EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

.....

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

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

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

E.~~7~~**6**.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart DD.

E.~~7~~**6**.2 Off-Site Waste and Recovery Operations NESHAP [40 CFR 63, Subpart DD] [326 IAC 20-23]

.....

SECTION E.~~8~~**7** FACILITY OPERATION CONDITIONS

Facility Description:

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

E.~~8~~**7**.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart 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 above listed emission unit, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

E.~~8~~7.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart IIII]

.....

SECTION E.~~9~~8 FACILITY OPERATION CONDITIONS

Facility Description:

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(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.~~9~~8.1 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

.....

ETC Comment 1:

IDEM has proposed that the Tradebe thermal desorption units (TDUs) comply with the NESHAP for process heaters, 40 CFR 63, Subpart DDDDD. However, the courts and US EPA have made clear that TDUs as operated by Tradebe must comply with a NESHAP for hazardous waste combustion units, 40 CFR 63, Subpart EEE.

Note: The comment above is a brief summary of the comment submitted by David Case of the Environmental Technology Council (ETC) above. ETC's entire comment (including two (2) attachments) is included as Appendix A to this ATSD.

Response to ETC Comment 1:

IDEM does not agree with the analysis and recommended changes proposed by Environmental Technology Council (ETC). Based on information provided by Tradebe and upon further evaluation by IDEM OAQ, it has been determined that the SDS and SDS II units at Tradebe are different than the thermal metal wash recycling unit (TMW) at Rineco Chemical Industries, Inc., and the thermal desorption unit (TDU) at TD*X Associates L.P., since the reclaimed organics in Tradebe's SDS and SDS II units are (will be) used directly or as ingredients to make products and are not (will not be) used as a fuel. A detailed response to this comment is provided below.

Pursuant to 40 CFR 63.1200 and 40 CFR 63.1201, the requirements of 40 CFR Part 63, Subpart EEE (National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hazardous waste combustors) are applicable to each "hazardous waste combustor", which is defined as "a hazardous waste incinerator, hazardous waste burning cement kiln, hazardous waste burning lightweight aggregate kiln, hazardous waste liquid fuel boiler, hazardous waste solid fuel boiler, or hazardous waste hydrochloric acid production furnace." The existing and new Solids Distillation System (SDS and SDS II) units will each be recycling operations achieved through thermal desorption, a process that separates the volatile organics from contaminated solid hazardous waste and results in the recovery of a usable product. Each of the SDS and SDS II units is not a cement kiln, aggregate kiln, boiler, or hydrochloric acid production furnace.

Therefore, the only way the SDS and SDS II units could be classified as a hazardous waste combustor is if they are hazardous waste incinerators.

Pursuant to 40 CFR 63.1201(a), a "hazardous waste incinerator" is defined as "a device defined as an incinerator in §260.10 of this chapter and that burns hazardous waste at any time. For purposes of this subpart, the hazardous waste incinerator includes all associated firing systems and air pollution control devices, as well as the combustion chamber equipment." 40 CFR 260.10 defines an "incinerator" as "any enclosed device that: (1) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or (2) Meets the definition of infrared incinerator or plasma arc incinerator." Each of the SDS and SDS II units is a thermal desorption unit, not a boiler, sludge dryer, carbon regeneration unit, listed industrial furnace, infrared incinerator, or plasma arc incinerator.

Therefore, the only way each of the SDS and SDS II units can satisfy the definition of "incinerator" is if they use controlled flame combustion. For a thermal desorption unit to use "controlled flame combustion" and thus be an incinerator, either the desorption chamber must be directly fired or the unit must have a fired afterburner to destroy organics [June 12, 1998 letter from Elizabeth Cotsworth, Acting Director, Office of Solid Waste, EPA, and Stephen D. Luftig, Director, Office of Emergency and Remedial Response, EPA, to Parker E. Brugge, Patton Boggs, L.L.P (RCRA Online Number 14266) and February 23, 1994 letter from Michael Shapiro, Director, Office of Solid Waste, EPA, to David D. Emery, Bioremediation Service, Inc. (RCRA Online Number 13657)]. Because the desorption chamber for each of the SDS and SDS II units is indirectly heated and not directly fired and because SDS and SDS II each does not have a fired afterburner, each does not use "controlled flame combustion" and each is not an incinerator as defined in 40 CFR 260.10 or a hazardous waste incinerator as defined in 40 CFR 63.1201(a). Therefore, each of the SDS and SDS II units are not a hazardous waste combustion unit subject to this NESHAP.

The comment from ETC references a court case involving Rineco Chemical Industries (Rineco). The court ruled that a thermal metal wash recycling unit (TMW) at Rineco was not eligible for the recycling exemption under RCRA, since the char and recovered oil from the TMW process was blended and sent off site for burning in a cement kiln as a hazardous waste derived fuel (HWDF). The court also ruled that even though the TMW was used for recycling metal, the primary purpose of the TMW was to blend hazardous waste into fuel. Finally, the court ruled that Rineco acted as an intermediary to a BIF (Boiler and/or Industrial Furnace) and the char and recovered oil did not meet the recycling exemption, since they were burned/incinerated.

The comment from ETC also references a Consent Agreement and Final Order (CAFO) with TD*X Associates L.P. In the Findings of Fact and Conclusions of Law section of the CAFO, it was determined that a portion of the oil recovered in the TD*X thermal desorption unit (TDU) and any non-condensable gases generated by the TDU were injected back into the combustion chamber of the TDU, where it was burned, and thus required a RCRA permit for the thermal treatment of hazardous waste in the combustion chamber of the TDU.

Each of the SDS and SDS II units is (will be) utilized for reclaiming hydrocarbons from non-liquid hazardous waste. The reclaimed organics are (will be) used directly or as ingredients to make products. The reclaimed organics are not (will not be) used as a fuel, and therefore are exempt from the need for a hazardous waste permit, pursuant to 40 CFR 261.6. This determination was confirmed in a July 2002 letter from IDEM's Office of Land Quality (*See the entire letter included as Appendix B to this ATSD*). The letter stated that the original indirect thermal desorption unit (what now is called SDS) was subject to the recycling unit exemption in the hazardous waste rules because it would be used to recover organics that will be used either directly or as ingredients to make products. Because the purpose of SDS II is the same as SDS, IDEM's 2002 determination applies with equal force to SDS II. *(Note: This source was formerly owned and operated by "Pollution Control Industries").* Therefore, for these reasons, the TMW at Rineco and the TDU at TD*X are different than the SDS and SDS II units at Tradebe.

A detailed analysis of Tradebe's SDS recycling exemption status was provided in March 31, 2006, letter from Thomas Easterly, Commissioner of IDEM to David Case, Environmental Technology Council (*See the entire letter included as Appendix C to this ATSD)*.

No changes were made to the permit as a result of this comment.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Heath Hartley 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) 232-8217 or toll free at 1-800-451-6027 extension 2-8217.

(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.

Appendix A
to
Addendum to the Technical Support Document (ATSD)

Tradebe Treatment and Recycling, LLC

Significant Source Modification No. 089-34432-00345
Significant Permit Modification No. 089-34503-00345

Comment submitted by David Case of the Environmental Technology Council
(93 pages)

Environmental Technology Council

1112 16th Street NW • Suite 420 • Washington DC 20036 • (202) 783-0870

Submitted by email: hhartley@idem.in.gov
and U.S. Postal Service Certified Mail

January 29, 2015

Heath Hartley
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Re: Permit SSM 089-34432-00345 and
Significant Permit Modification 089-34503-00345

Dear Sir:

The Environmental Technology Council (ETC) respectfully submits these comments on the above-referenced Significant Permit Modification for the Anaerobic Thermal Desorption Units at the Tradebe Treatment and Recycling facility in East Chicago, Indiana.

The ETC is the national trade association for the commercial hazardous waste management industry. ETC member companies provide services and technologies to customers for the recycling, treatment, and secure disposal of industrial and hazardous wastes. In particular, ETC members operate thermal desorption units (TDUs) for processing hazardous wastes, with similar basic design and operating parameters as the Tradebe units. We therefore are familiar with the Title V permits issued by EPA and other states and the RCRA provisions that apply to these TDUs for comparison to the draft permit modification proposed by IDEM.

The Draft Title V Permit Is Based On The Wrong NESHAP

IDEM has proposed that the Tradebe TDUs comply with the NESHAP for process heaters. 40 CFR 63, Subpart DDDDD. However, the courts and U.S. EPA have made clear that TDUs as operated by Tradebe must comply with a Title V permit based on the NESHAP for hazardous waste combustion units. 40 CFR 63, Subpart EEE. The Tradebe TDUs process a broad range of hazardous wastes and constitute a major source subject to Clean Air Act NESHAP requirements. We understand that TDUs are indirectly heated and therefore do not meet the strict definition of a hazardous waste incinerator. Nevertheless, the emissions of concern result from the processing of hazardous wastes, not the burning of natural gas for indirect heating, so the NESHAP for process heaters is grossly inadequate for protection of human health and the environment.

Instead, the courts and U.S. EPA have determined that the NESHAP for hazardous waste combustors is the correct permitting approach for units with the design, operation, and hazardous waste throughput of the Tradebe TDUs. The processing of hazardous wastes in TDUs can result in emissions of dioxins/furans, mercury, heavy metals, and other toxic contaminants that are present in the hazardous waste feed to the units. Tradebe accepts an extensive list of hazardous wastes for processing in its TDUs, including paint waste, solvent soaked rags, resins, polymers, plastics, production debris, and discarded commercial chemicals. The resulting toxic emissions would not be expected from burning natural gas and therefore are not controlled by the NESHAP for process heaters. The hazardous waste combustor NESHAP must be used as the basis for adopting emission limits and operating parameters for the Tradebe TDUs.

The Court Decision In The Rineco Case Must Be Followed

Tradebe may argue that its TDUs do not conduct hazardous waste combustion because the unit is operated under low oxygen conditions using an external heat source. However, this argument was squarely rejected by U.S. EPA and the court in the Rineco case. (A copy of the court decision is attached to these comments for reference.)

Rineco Chemical Industries in Benton, Arkansas, operated a TDU of similar design and operation as the Tradebe TDUs. Rineco also asserted that hazardous waste combustion could not occur in the TDU because the "materials are indirectly heated in an oxygen-depleted chamber." Rineco Decision, Page 19 of 29. Nevertheless, EPA presented evidence – and the court found – that even with oxygen limited conditions, there was sufficient oxygen to support some burning of hazardous wastes, and in fact a significant amount of hazardous wastes were being burned in the TDU. Using a mass balance analysis, the court found that the data provided by Rineco itself on the amount of material fed to the TDU and the amount of material recovered did not account for approximately 13.9% of hazardous wastes that were destroyed by combustion. Rineco Decision, Page 20 of 29. This material was disposed of, burned, or incinerated in the treatment process in the TDU. *Id.* The court also found the residual char from the TDU "indicates that the destruction of organic materials takes place." *Id.* The Tradebe TDUs also produce significant quantities of char.

TDUs are generally of similar design and operation, and it is simply not possible to eliminate all oxygen from the chamber. Tradebe's TDUs are no exception. If Tradebe disputes the court's ruling, then a documented mass balance analysis should be developed to determine the amount of hazardous waste feed that is unaccounted for because of combustion. In any event, Tradebe does not dispute that its TDUs produce a large amount of char, which EPA and the court concluded also indicates that combustion is occurring.

Thus, it does not matter that the Tradebe TDU is not an incinerator. The draft Title V permit appears to rely on the statement that the TDU does not meet the strict definition of an incinerator as the basis for rejecting the NESHAP for hazardous waste combustors, but this is clear error. The question is not whether the TDU is an incinerator, but whether the

TDU is engaged in combustion of hazardous wastes. U.S. EPA and the court indisputably found that TDUs as operated by Tradebe burn some hazardous wastes in the treatment chamber. While the NESHAP for hazardous waste combustors applies on its face to incinerators, cement kilns, and boilers that burn hazardous waste, it must also be used as the basis for permitting major source TDUs that burn hazardous wastes as well. The NESHAP for process heaters with its limited standards for burning natural gas is clearly not adequate to protect against harmful toxic emissions from hazardous waste burning.

Tradebe Cannot Claim An Exemption For Recycling

Tradebe may also argue that its TDUs are recycling units exempt from RCRA permitting, so the NESHAP for hazardous waste combustors should not apply because it was issued under the joint authority of RCRA and the Clean Air Act. This argument fails on two counts, however. First, it is irrelevant that the NESHAP for hazardous waste combustors also satisfies the RCRA law's requirements for emission controls because this NESHAP is also a Clean Air Act regulation that applies through the Title V permit program. Regardless of the Tradebe TDUs' status under RCRA, the NESHAP for hazardous waste combustors is the applicable regulation under the Clean Air Act.

Second, U.S. EPA and the court also squarely rejected the claim that TDUs that recycle hazardous wastes are exempt from RCRA permitting when a portion of the TDU residual stream is used for hazardous waste fuel blending. Both U.S. EPA and IDEM regulations provide that hazardous wastes that are recycled do not qualify for an exemption if any portion is used as a hazardous waste fuel. *See* 40 CFR 261.6(a)(2); Rineco Decision, Page 14-18 of 29. Rineco argued in its court case that its TDU was used primarily to recycle metal. Likewise, Tradebe asserts that its TDU is used primarily to recycle hazardous wastes into marine cleaning solvent. Nevertheless, both Rineco and Tradebe direct some of the residual process streams into their hazardous waste fuel blending. *See* the Tradebe brochure attached, which states: "After processing, a portion of the residual material can be beneficially used in energy recovery." Both U.S. EPA and the court concluded that this activity disqualifies a recycling facility from the regulatory exemption from RCRA permitting

In addition, a Federal appeals court recently ruled in two different cases that burning of hazardous wastes must be subject to RCRA, and cannot be exempted as a recycling activity. In *Natural Resources Defense Council v. EPA*, 755 F.3d 1010 (D.C. Cir. 2014), the court held that an exclusion for hazardous waste burned in a manner that is comparable to fossil fuels was unlawful. In *Sierra Club v. EPA, 755 F.3d 968 (D.C. Cir. 2014)*, the court ruled that hazardous waste burned or processed into fuel in a gasification unit could not be excluded from RCRA. We strongly request that IDEM permitting staff consult with legal counsel to understand the importance and relevance of these court decisions. Because some of the hazardous wastes fed to the Tradebe TDUs are at least partially burned in the unit (as discussed above), and because the hazardous waste residual streams from the TDU are also used to produce a fuel, the TDUs are clearly subject to RCRA permitting requirements.

Indeed, to our knowledge, U.S. EPA has required all other commercial TDUs that process hazardous wastes to have RCRA permits under 40 CFR Subpart X for miscellaneous treatment units. The only exception is TDUs that process certain oil-bearing hazardous wastes from petroleum refining, production, or transportation practices. *See* 40 CFR 261.6(a)(3)(iii) & (iv). Tradebe does not claim to qualify for this exception and, in fact, Tradebe processes a wide range of hazardous wastes. U.S. EPA has taken major enforcement actions against TDUs that do not have RCRA permits, including the Rineco case and a recent Consent Agreement with TDX, *et al.*, in EPA Region 6. (The Consent Agreement and Final Order is attached for reference.) In general, these RCRA Subpart X permits issued to commercial TDUs that are major or area sources may incorporate emission limits and operating parameters from the NESHAP for hazardous waste combustors.

Thus, Tradebe clearly should have a RCRA permit for its TDUs. It does not. This matter should be referred to IDEM's Office of Land Quality for permit enforcement action, and in the meantime the draft Title V permit should be revised to incorporate the NESHAP for hazardous waste combustors.

Respectfully submitted,

David R. Case
Executive Director

ATTACHMENT

COURT DECISION IN RINECO CASE

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
WESTERN DIVISION

UNITED STATES OF AMERICA,	*	
	*	
Plaintiff,	*	
	*	
vs.	*	No. 4:07cv001189 SWW
	*	
	*	
	*	
RINECO CHEMICAL INDUSTRIES, INC.,	*	
	*	
Defendant.	*	

MEMORANDUM AND ORDER

The United States of America brings this civil action against Rineco Chemical Industries, Inc. ("Rineco") under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901 *et seq.* The United States seeks injunctive relief and civil penalties against Rineco for violations of RCRA Sections 3005(a) and 3010, 42 U.S.C. §§ 6925(a) and 6930, and Arkansas Pollution Control and Ecology Commission ("APCEC") Regulation No. 23, which incorporates federal regulations approved by the Environmental Protection Agency ("EPA") pursuant to RCRA that are part of the federally-enforceable State hazardous waste program relating to the generation, transportation, treatment, storage, handling, and disposal of hazardous waste.

Now before the Court are cross-motions of the parties for summary judgment [doc.#'s 13, 40] to which responses and replies have been filed. The Court held a hearing on these motions at the request of Rineco on September 4, 2008, and the matter is now ripe for decision. For the reasons that follow, the Court grants the United States' motion for summary judgment [doc.#40]

and denies Rineco's motion for summary judgment [doc.#13].[1]

I.

A.

RCRA is a comprehensive environmental statute that governs the treatment, storage, and disposal of solid waste. *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 483 (1996) (citation omitted). RCRA's primary purpose is to reduce the generation of hazardous waste and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated "'so as to minimize the present and future threat to human health and the environment.'" *Id.* (quoting 42 U.S.C. § 6902(b)).

RCRA's Subtitle C, 42 U.S.C. §§ 6921 *et seq.*, establishes a "cradle-to-grave" regulatory system for the treatment, storage and disposal of hazardous wastes. *Cement Kiln Recycling Coalition v. E.P.A.*, 493 F.3d 207, 211 (C.A.D.C. 2007) (citations and internal quotation marks omitted). This system operates through a combination of national standards established by EPA regulations, and a permit program in which permitting authorities – either EPA or states that have hazardous waste programs authorized by EPA – apply those national standards to particular facilities. *Id.*

Permits are generally required under RCRA for any facility that engages in the treatment, storage, or disposal of hazardous waste. *United States v. Manning*, 434 F.Supp.2d 988, 998

[1] The Court deferred ruling on these motions pending a settlement conference before a Magistrate Judge in late October 2008 that proved unsuccessful. Following that settlement conference, the Court, by Order dated November 24, 2008 [doc.#85], granted a motion of Rineco for leave to file what it claimed to be newly discovered summary judgment evidence. In addition, the Court in that same November 24th Order granted leave of the United States to amend and supplement its complaint to add three additional claims. These additional claims are not addressed in the parties' cross-motions for summary judgment now under consideration.

(E.D. Wash. 2006). Section 3005(a) of RCRA, 42 U.S.C. § 6925, establishes a case-by-case permitting process. *Cement Kiln Recycling Coalition*, 493 F.3d at 211-12. Section 3005(a) directs EPA to promulgate regulations requiring each person owning or operating an existing facility that engages in the treatment, storage, or disposal of hazardous waste, or planning to construct a new facility that engages in the treatment, storage, or disposal of hazardous waste to have a permit pursuant to this section. *Id.* at 212 (quoting 42 U.S.C. § 6925(a)). Pursuant to Section 3005(a), EPA promulgated regulation 40 C.F.R. § 270.1(b), which provides that "[s]ix months after the initial promulgation of the part 261 regulations [Identification and Listing of Hazardous Waste], treatment, storage, or disposal of hazardous waste by any person who has not applied for or received a RCRA permit is prohibited." *See also United States v. Heuer*, 4 F.3d 723, 730 (9th Cir. 1993) ("It is fundamental that an entity which performs a hazardous waste activity for which a permit is required under RCRA may not legally perform that activity unless it has a permit for the relevant activity").

As indicated previously, pursuant to RCRA subsection 3006(b), EPA may authorize a state to administer and enforce its own hazardous waste program, so long as the state program is equivalent to and consistent with EPA's program and provides adequate compliance and enforcement measures. 42 U.S.C. § 6926(b). When a state obtains such authorization, the state hazardous waste program operates "in lieu" of the federal program. *Id.*

The State of Arkansas received final authorization to enforce its hazardous waste program on January 25, 1985. 40 C.F.R. § 272.201(a).[2] The Arkansas Department of Environmental Quality ("ADEQ") is the state agency primarily responsible for carrying out this authority in the

[2] Subsequent program revision applications were later approved. *Id.*

State of Arkansas.[3] During the time Arkansas has been authorized to administer the RCRA hazardous waste program, facilities in that state have been regulated under the provisions of APCEC Regulation No. 23, which has adopted and incorporated verbatim from the federal RCRA regulations.[4]

Despite having authorized a state to act, EPA frequently files its own enforcement actions against suspected environmental violators, even after the commencement of a state-initiated enforcement action (a process known as overfiling). *Harmon Indus., Inc. v. Browner*, 191 F.3d 894, 898 (8th Cir. 1999).[5] Before initiating any such action, however, RCRA requires that EPA give the authorized state prior notice. RCRA Section 3008(a)(2), 42 U.S.C. § 6928(a)(2).

B.

Rineco owns and operates a facility in Benton, Arkansas that is engaged in the generation, treatment, and storage of hazardous waste. Rineco is the largest single-site hazardous waste fuel blending facility in the United States and receives more than 400 different types of listed and characteristic solid phase and liquid phase hazardous wastes at its facility from a large number of

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[3] APCEC is the environmental policy-making body for Arkansas and ADEQ implements those policies.

[4] All paragraph numberings within APCEC Regulation No. 23 are the same as those used in the equivalent Federal Part such that someone seeking, for example, the State equivalent to 40 C.F.R. § 261.3(a)(2)(i) need only refer to APCEC Regulation No. 23 § 261.3(a)(2)(i). Because Arkansas' regulations are substantially identical to EPA's regulations, analysis of the federal scheme can overlay and define that of Arkansas. *Cf. United States v. Power Engineering Co.*, 191 F.3d 1224, 1228 (10th Cir. 1999) (determining that because Colorado's regulations are substantially identical to EPA's regulations, analysis of the federal scheme can overlay and define that of Colorado).

[5] In *Harmon*, the United States Court of Appeals for the Eighth Circuit held that the federal government's right to pursue an enforcement action under RCRA attaches only when a state's authorization is revoked or when a state fails to initiate any enforcement action, and that EPA's practice of overfiling, in those states where it has authorized the state to act, oversteps the federal agency's authority under RCRA. 191 F.3d at 901-02. The Eighth Circuit's decision in *Harmon* concerning EPA's authority to overfile has not been without some criticism. *See, e.g., United States v. Power Engineering Co.*, 303 F.3d 1232 (10th Cir. 2002). Such is of no consequence here, however, as the State of Arkansas has not initiated an enforcement action against Rineco concerning the matters before the Court.

generators of hazardous waste.[6]

Rineco applied for and obtained a permit to operate a hazardous waste management facility at its Benton facility, RCRA Permit No. 28H-M001. Located at this facility is a Thermal Metal Wash Recycling Unit ("TMW"). The TMW is protected by Rineco Patent No. 7,341,155 B2 ("Patent"), which "relates generally to waste processing, and more particularly to systems and methods for processing heterogeneous waste materials." As noted in the Patent,

> [i]ndustry produces large amounts of waste that must be processed and disposed of by waste operators. Most of this waste is heterogeneous waste, which includes liquids and solids, which is friable and non-friable, which melts at various temperatures, has various solidification temperatures, low auto-ignition temperatures, and high vapor pressure. The waste material also includes ferrous and non-ferrous metals in a wide range of sizes. This waste is often categorized by applicable environmental regulations as "hazardous waste" because of its flammable, corrosive, or toxic nature. Thus, the disposal of such waste is heavily regulated by environmental regulations.
>
> There are inefficiencies associated with currently-available processes for disposing of industrial waste. Thus, a heretofore unaddressed need exists in the industry for systems and methods of processing waste materials.

The original TMW began operation in June 2003 and ceased operation in July 2004. The current TMW commenced operation in March 2005. The operation of both the original and the new TMW are similar, the main difference being, states Rineco, that the external heat source for the original TMW was natural gas while the external heat source for the new TMW is electricity and circulating hot oil.

The operation of the TMW, which does not have a RCRA permit, is at the center of the United States' claims in this action. The United States claims the primary purpose of the TMW

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[6] These wastes contain variable levels of ignitability, corrosivity, reactivity, and toxicity, and include arsenic, barium, benzene, cadmium, carbon tetrachloride, chromium, cresol, 1,4-dichlorobenzene, lead, mercury, wastewater treatment sludge, silver, vinyl chloride, spent halogenated and non-halogenated solvents, spent cyanide, acrylic acide, carbamic acid, DDT, sulfuric acid, toluene, xylene, etc.

is to convert a chemical soup of hazardous waste streams into hazardous waste derived fuel ("HWDF") for sale to boiler and industrial furnaces ("BIFs"), an activity it claims requires a RCRA permit. Rineco, however, claims the TMW is designed to recycle metal from hazardous and non-hazardous materials, an activity it claims is exempt from regulation and does not require a RCRA permit.

Prior to constructing the TMW at its facility, Rineco inquired of ADEQ concerning the TMW's permitting requirements. By letter dated January 10, 2003, ADEQ informed Rineco that it had made a regulatory determination regarding the TMW based on the following assumptions:

- The unit's intended purpose is to recycle metal contaminated with hazardous waste and recover scrap metal from Rineco's waste stream.
- No scrap metal from this unit will be blended into Rineco's fuel or otherwise disposed. The scrap metal will be recycled.
- The waste entering the auger contains metal contaminated with hazardous waste.
- The hazardous waste/constituents leaving the process will be handled properly as hazardous waste.
- The auger used in the process does not grind the hazardous waste entering the system; the auger only moves the waste stream.
- This unit is not intended to decontaminate containers.

ADEQ stated that "[b]ased on these assumptions, the processing unit does not require a permit, at this time" but that "the hopper may be considered a storage unit requiring a permit if the waste stream remains in the hopper for any period of time." *Id.* ADEQ went on to state that "[t]his determination is based on information submitted by Rineco for this specific unit for a specific use; the exemption does not apply to a different unit or may not apply if this unit is not utilized as

intended, and in accordance with the above assumptions." *Id.*

On February 21, 2003, ADEQ sent a letter to Rineco clarifying at the request of Rineco its position on "scrap metal contaminated with hazardous waste." ADEQ stated that scrap metal, in and of itself, is exempt from hazardous waste regulation. However, ADEQ also stated "when scrap metal is mixed with non-scrap metal material (*i.e.* listed or characteristic hazardous waste), the mixture would not be considered a scrap metal and the entire mixture would be subject to regulation."

By letter dated July 20, 2004, ADEQ informed Rineco that it had reason to believe that the TMW was

> not being operated in a manner that conforms to a regulatory based exclusion from hazardous waste management permitting. Based on the information gathered during our investigation and observations we find that the material being processed in the unit is a mixture of hazardous waste and shredded metal. Therefore, the entire mixture is a hazardous waste. This unit is therefore subject to permitting as a hazardous waste management unit.
>
> This letter shall serve as notice to Rineco that the introduction of hazardous waste to the [TMW] must cease immediately. Operation of the [TMW] that does not strictly conform to the January 10, 2003 and February 21, 2003 letters must be suspended until such time as this issue is resolved.

On July 30, 2004, after meeting with Rineco, Marcus Devine ("Devine"), then-Director of ADEQ, wrote to the company stating that

> [t]his letter affirms that the regulatory interpretation provided to Rineco in ADEQ's letters dated January 10 and February 21, 2003, reflect our current position on the issue. Our position, in brief, is that the TMW does not require a Hazardous Waste Management permit provided it is operated in the manner and for the specific purpose that Rineco described in their request for confirmation of this determination. Of course, the assumptions ADEQ stated in the January 10, 2003, letter and further clarified in the February 21, 2003, letter must remain valid, otherwise ADEQ may choose to revisit its position on the regulatory status of the unit.

On January 13, 2005, ADEQ sent a letter to Rineco stating that ADEQ had been informed that the TMW had been removed and, if Rineco had constructed a new TMW, ADEQ had to be officially notified to determine the regulatory status of the new unit. On February 2, 2005, Rineco confirmed that it had revised the TMW and expected the new TMW to be in full production shortly.

On February 9, 2005, Devine wrote to Rineco indicating that he was "disturbed to learn that Rineco has not informed the [ADEQ] staff of the details of this new/revised process," and that "[t]he regulatory determination by this agency in January 2003 was strictly limited to the unit addressed by the determination letter and limited in scope based on the nature of the operation as described at the time the determination was made." ADEQ required Rineco to provide a variety of information describing the operation of the revised unit in order to make a regulatory determination.

On March 22-24, 2005, EPA conducted an inspection of the Rineco facility. The purpose of this inspection was to evaluate Rineco's systems and methods for processing waste materials and facility compliance with RCRA. On June 28, 2005, EPA conducted a followup inspection of the Rineco facility because the TMW was not operating during the first inspection. The purpose of the second inspection was to evaluate the incoming and outgoing streams from Rineco's TMW.

Based on the March 22nd–24th and June 28th inspections and documentation provided by Rineco, EPA determined that the TMW is a thermal treatment device that applies heat (over 1000 degrees Fahrenheit) to vaporize hydrocarbons and water and thereby change the physical and chemical composition of the hazardous waste fed into the unit, by separating the waste into six

waste streams after treatment in the unit: water, oil, char, metal, vapor, and "inerts."[7] EPA states that solid and liquid phase wastes are placed in the TMW on a moving conveyor and that materials are then heated in an oxygen-limited chamber using an external heat source to vaporize hydrocarbons and water, and reduce the cohesiveness of the solid and liquid waste material. Vapors are then condensed and cooled, states EPA, and condensed vapors are passed through the oil-water separators to recover liquid hydrocarbons; the recovered hydrocarbons, along with other liquid waste, are transferred to the hydropulper where they are mixed into HWDF. Non-condensable vapors, states EPA, are combined and vented to a thermal oxidation unit ("TOU") for destruction, while solids exit the heated chamber where the materials are cooled, and the cooled material enters a vibratory screen and magnet train that separates the metal from the char. EPA states that the metal is discharged via a conveyor to dump trucks for possible sale and that the char is transferred to the hydropulper where it is mixed, along with the liquid waste, into fuel for sale to BIFs, including cement kilns. The United States argues that the TMW, far from being designed for recycling metal, is an integral part of a fuel blending activity.

Rineco, in turn, states that the TMW is a relatively simple device designed to recycle metal from hazardous and non-hazardous materials. Rineco states that metal-containing materials are placed in the TMW on a moving conveyor and that materials are then heated in an oxygen-depleted chamber via an external heat source to break the adhesive bonds of the materials

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[7] Rineco does not dispute that the TMW is a type of thermal treatment unit (although Rineco states that the TMW does not, as argued by the United States, apply heat to change both the chemical and physical character and composition of the waste fed into the TMW but, rather, that the heat merely breaks the adhesive bonds of the material that are attached to the surface of the metal). Thermal treatment units that do not use internal controlled flame combustion, as the TMW does not, are classified as "miscellaneous units" and subject to the standards for the management of hazardous waste set forth in APCEC Regulation No. 23 Part 264, Subpart X, §§ 264.600-264.603. The United States does not dispute that miscellaneous units may nevertheless be potentially exempt from regulation under RCRA.

that are attached to the surface of the metal. By heating the material, states Rineco, the adhesive bonds are broken, and the material separates from the metal. Rineco states the condensable vapors are captured and sent through a series of condensers/scrubbers, which cool the vapors, remove entrained solids, and carry them back in a liquid form, while the solids are sent through a series of cooling screws, vibrating screens, and magnets to further separate the metal from other inert materials. The final product of the TMW, states Rineco, is clean metal, which is sold to third parties, and all of the other separated materials (solids, liquids, and gases) are handled in accordance with RCRA and the Clean Air Act, 42 U.S.C. §§ 7401 *et seq*. With respect to these other separated materials – or output – from the TMW, Rineco acknowledges that the oil and char wind up in cement kilns where they are burned for energy recovery.

Two months after EPA's March 2005 inspection, Devine, on April 12, 2005, stated in a one-sentence letter that "I have determined that the unit at the Rineco facility known as the Thermal Metal Wash Recycling Unit does not require a hazardous waste management permit pursuant to the Arkansas Pollution Control and Ecology Commission Regulation No. 23, § 261.6(c)(1)."[8] EPA, however, states that a substantial percentage of oil and char resulting from the treatment process in the TMW is blended into HWDF and provided to BIFs where it is burned for energy recovery and that this activity requires a RCRA permit. EPA states Rineco's RCRA Permit No. 28H-M001 does not include the treatment, storage, or disposal activities connected with the TMW, and that it has asked Rineco to apply for a modification of its RCRA

[8] According to the United States, ADEQ's staff, including the Hazardous Waste Division Director, believe that the TMW requires a permit but that Devine took a different position. Devine's April 12th letter does not, however, revoke ADEQ's previous correspondence with the company stating that the agency's conclusion was based on Rineco's compliance with six conditions and, thus, Devine's determination seemingly was made in the context of Rineco's representations of the specific purpose and operation of the TMW.

permit to include such activities but that Rineco has not done so. This action followed.[9]

II.

The United States asserts five claims for relief in its original complaint concerning operation of the TMW: (1) unauthorized operation of RCRA treatment unit; (2) unauthorized operation of RCRA storage unit; (3) unauthorized operation of RCRA disposal unit; (4) failure to notify of hazardous waste activity; and (5) failure to provide financial assurances. Rineco moves for summary judgment on each of those claims, its central argument being that the TMW does not require a RCRA permit as the TMW is engaged in the recycling process and, thus exempt from regulation under APCEC Regulation No. 23 § 261.6(c)(1). The United States likewise moves for summary judgment on each of the claims asserted in its original complaint, asserting that two separate grounds entitle it to summary judgment, either of which it states is sufficient for the United States to prevail: first, Rineco's hazardous waste activities are not eligible for the recycling process exemption as a matter of law because, under APCEC Regulation No. 23 § 261.6(a), as an intermediary to a BIF, Rineco is not eligible for the recycling exemption set forth in APCEC Regulation No. 23 § 261.6(c)(1); second, Rineco is not engaged in a recycling activity in the TMW and cannot qualify for the recycling exemption because when waste materials are abandoned by disposal, burning or incineration, they are not recycled. Both parties argue there are no genuine issues of material fact with respect to these issues and that each is entitled to summary judgment as a matter of law.

[9] Rineco does not dispute that notice of the commencement of this action was given to the State of Arkansas in accordance with 42 U.S.C. § 6928(a)(2).

A.

Summary judgment is appropriate when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). As a prerequisite to summary judgment, a moving party must demonstrate "an absence of evidence to support the non-moving party's case." *Celotex Corp. v. Catrett*, 477 U.S. 317, 325 (1986). Once the moving party has properly supported its motion for summary judgment, the nonmoving party must "do more than simply show there is some metaphysical doubt as to the material facts." *Matsushita Elec. Indus. Co. v. Zenith Radio*, 475 U.S. 574, 586 (1986). The nonmoving party may not rest on mere allegations or denials of his pleading, but must "come forward with 'specific facts showing that there is a *genuine issue for trial.*'" *Id.* at 587 (quoting Fed.R.Civ.P. 56(e) and adding emphasis). *See also Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256 (1986). The inferences to be drawn from the underlying facts must be viewed in the light most favorable to the party opposing the motion. *Matsushita,* 475 U.S. at 587 (citations omitted). However, "[w]here the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no 'genuine issue for trial.'" *Id.* (citation omitted). "Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment." *Anderson*, 477 U.S. at 248. "Factual disputes that are irrelevant or unnecessary will not be counted." *Id.*

B.

1.

Addressing first the United States' claim of unauthorized operation of RCRA treatment unit, the United States alleges that since 2003 Rineco has been an owner or operator of a unit for the treatment of hazardous waste, without a required permit, in violation of section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10. Rineco, in turn, argues that as a matter of law, Rineco's TMW is exempt from regulation under APCEC Regulation No. 23 § 261.6(c)(1) and thus operation of the TMW does not require a RCRA permit.

a.

The Court has carefully considered the matter and agrees with the United States that Rineco's hazardous waste activities are not eligible for the recycling process exemption as a matter of law because, under APCEC Regulation No. 23 § 261.6(a),[10] as an intermediary to a BIF, Rineco is not eligible for the recycling exemption set forth in APCEC Regulation No. 23 §

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[10] APCEC Regulation No. 23 § 261.6(a) provides in pertinent part:

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

> (2) The following recyclable materials are not subject to the requirements of this section but are regulated under subsections C through H of section 266 of this regulation and all applicable provisions in section 270 of this regulation and 40 CFR Part 124:
>
> > (i) Recyclable materials used in a manner constituting disposal (subsection C);
> >
> > (ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under subsection O of section 264 or 265 of this regulation (subsection H).

261.6(c)(1).[11] Under § 261.6(a)(2)(ii), recyclable materials, *i.e.* hazardous wastes burned for energy recovery in BIFs, are not subject to the requirements for generators, transporters, and storage facilities listed in §§ 261.6(b) and 261.6(c), but instead are regulated under Subparts C through H of Part 266. Under Subpart H of Part 266, "[o]wners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of Sections 264, 265, and 270 of this regulation." APCEC Regulation No. 23 § 266.101(c)(1). The Subpart H regulations provide that "[t]hese standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner." *Id.* Rineco is an intermediary fuel blender that treats hazardous wastes in the TMW that are sold to and burned for energy recovery in BIFs, including cement kilns, which are regulated under Part 266, Subpart H. Thus, the exemption set forth in § 261.6(c)(1) is inapplicable to Rineco.

Rineco concedes that recyclable materials subject to APCEC Regulation No. 23 § 261.6(a) do not qualify for the recycling exemption but argues that § 261.6(a) does not apply in the instant case because Rineco only recycles metal in the TMW. While Rineco admits that a substantial percentage of oil and char resulting from the treatment process in the TMW is blended into HWDF and sent to BIFs where it is burned for energy recovery, Rineco contends that only the percentage of metal resulting from the treatment process should be counted as

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[11] APCEC Regulation No. 23 § 261.6(c)(1) provides:

(c)(1) Owners or operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of subsections A through L, AA, BB, and CC of sections 264 and 265, and under sections 266, 268, and 270 of this regulation and 40 CFR Part 124, and the notification requirements under section 3010 of RCRA, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in § 261.6(d).)

recyclable materials in assessing whether § 261.6(a) applies and that focusing on the other materials exiting the TMW that are sent for use as fuel is a "red herring." In support of this argument, Rineco relies on a passage in EPA's Office of Solid Waste and Emergency Response Memorandum 9521.1994(01), entitled "Regulation of Fuel Blending and Related Treatment and Storage Activities" (the "Guidance"), which provides as follows:

> There may be some recycling operations at a fuel blending facility that are exempt from permitting, even though the fuel blending process itself is not exempt. The exemption is only available to units that are solely engaged in permit-exempt recycling; if the reclaimed materials are sometimes sent for use as a fuel, then the recycling unit would be subject to the permitting standards.

Rineco, states that "[a]s the [G]uidance explains, if the reclaimed materials are themselves sometimes sent for use as a fuel, then the recycling unit would be subject to permitting standards (*i.e.* the unit would not "solely" be engaged in recycling activities)." In contrast, states Rineco, "if the reclaimed materials are <u>never</u> sent for use as a fuel, like the reclaimed metal in this case, the recycling unit exemption would apply." Rineco states that because the material recycled in the TMW is metal, and metal recycled in the TMW is never burned for energy recovery, § 261.6(a)(2)(ii) does not apply to metal recycling in the TMW. Consequently, states Rineco, the materials placed into the TMW are subject to the general requirements of APCEC Regulation No. 23 § 261.6, including the recycling unit exemption in § 261.6(c)(1), and the TMW would be exempt from regulation under RCRA.

The Court rejects Rineco's assertion that the word "solely"in the Guidance exclusively refers to the ultimate use of the recycled material and that the focus should be exclusively on the percentage of metal generated from the TMW while ignoring all other outputs from the treatment process. Clearly, metal is not the only material recycled in the TMW, and APCEC Regulation

No. 23 § 261.6(a)(2) specifically provides that recyclable materials, *i.e.* hazardous wastes burned for energy recovery in BIFs, are not subject to this section. Rineco points to the word "reclaimed" in the Guidance, but in the preamble to the hazardous waste regulations EPA explained that although "commercial products reclaimed from hazardous wastes are products, not wastes, and so are not subject to the RCRA Subtitle C regulations," waste-derived fuel resulting from the reclamation process continues to be governed by RCRA:

> We caution, though, as we did in the proposal, that this principle does not apply to reclaimed materials that are not ordinarily considered to be commercial products, such as waste-waters or stabilized wastes. The provision also does not apply when the output of the reclamation process is burned for energy recovery or placed on the land. These activities are controlled by the provisions of the definition dealing with using hazardous wastes as ingredients in fuel or land-applied products. For instance, if a spent solvent is treated and blended with oil to sell as a fuel, that waste-derived fuel is still subject to RCRA jurisdiction.

50 Fed.Reg. 614, 634 n.20, Final Rule – Hazardous Waste Management System: Definition of Solid Waste, January 4, 1985.[12] Thus, if reclaimed materials from the TMW are sometimes sent for use as a fuel, as indisputably occurs with oil and char, then the TMW cannot be exempt from the RCRA permitting requirements of Part 266, Subpart H.

There is certainly evidence in the record showing that a substantial percentage of the output from the TMW is not metal, even though the recovery of metal clearly takes place and is one of the purposes of the TMW. While the metal recycled in the TMW is not burned for energy recovery, the deposition testimony of three former Rineco employees (whom Rineco describes as "disgruntled") and certain Rineco documents support the United States' contention that a

[12] Rineco proffers EPA's Revisions to the Definition of Solid Waste, Final Rule, 73 Fed. Reg. 64668-01, October 30, 2008. These revisions are of no help to Rineco, however, as the final rule clarifies that the exclusion for hazardous secondary materials that are legitimately recycled "does not include the recycling of hazardous secondary materials that are . . . burned to recover energy or used to produce a fuel or otherwise contained in fuels (40 C.F.R. § 261.2(c)(2))." *Id.* at 64669, 64670, 64710, 64751.

substantial percentage of oil and char resulting from the treatment process in the TMW is blended into HWDF and sent to BIFs where it is burned for energy recovery. Michael W. Tallent ("Tallent"), a former Rineco Production Chemist, testified that he worked as senior production chemist/warehouse manager when the first TMW was installed at Rineco and that the primary purpose of the TMW was not to recycle metal, but to blend hazardous waste into fuel which was burned for energy recovery at BIFs. Similarly, S. Bradley Cummock ("Cummock"), a former Rineco Director of Operations and who was an employee of Rineco from January 1996 through July 2003, testified that the primary purpose of the TMW, especially from a financial standpoint, was to blend hazardous waste into fuel for cement kilns, not to recycle metal. Brad Patty ("Patty"), the former Rineco Director of Operations after Cummock and who worked as Director of Operations at Rineco from August 2003 to January 2006, also testified that the primary intent of the TMW was to blend hazardous waste into fuel for cement kilns, not to recycle metal.

Certain Rineco documents concerning operation of the TMW corroborate the testimony of Rineco's former Production Chemist and Directors of Operations. Between 2003 and 2008, the annual TMW Mass Balance Reports show that the TMW treatment process produced more than twice as much oil and char as metal. In addition, a TMW Monthly Profit Analysis for the month of January 2006 (which is under seal) shows the percentage of Rineco's profit from the TMW that was derived from metal sales, a percentage that certainly seems inconsistent with Rineco's claim that the primary purpose of the TMW is to recycle metal. Rineco characterizes its own Mass Balance Reports as "incomplete and inaccurate" and its TMW Monthly Profit Analysis as "incomplete and based on mere speculation," but Rineco cannot create facts issues

with its own conflicting assertions.[13]

In sum, the Court determines that Rineco's TMW unit does not qualify for the recycling process exemption set forth in APCEC Regulation No. 23 § 261.6(c)(1) because, under APCEC Regulation No. 23 § 261.6(a)(2)(ii), hazardous wastes that are burned for energy recovery in a BIF (as are the wastes managed in Rineco's TMW unit), are subject to APCEC Regulation No. 23 Part 266, Subpart H. Were the Court to uphold Rineco's interpretation, any hazardous waste treatment unit that processed an incidental amount of recovered material that is not burned for energy recovery would qualify for the recycling exemption. Such an interpretation is contrary to the regulations and RCRA's purpose to ensure the proper treatment, storage and disposal of hazardous waste so as to minimize the present and future threat to human health and the environment. *Meghrig*, 516 U.S. at 483.[14]

b.

The Court additionally agrees with the United States that the TMW is not eligible for the

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[13] Rineco, as previously noted, may not rest on mere allegations or denials of its pleadings, but must come forward with specific facts showing that there is a genuine issue for trial. *Matsushita*, 475 U.S. at 587. *See also* APCEC Regulation No. 23 § 261.2(f) (respondents in actions to enforce regulations implementing subtitle C of RCRA who raise a claim that certain material is conditionally exempt from regulation must demonstrate that they meet the terms of the exemption; in doing so, they must provide appropriate documentation to demonstrate that the material is exempt from regulation).

[14] Citing EPA's RCRA Orientation Manual 2006, Rineco argues that EPA has found that distillation units engaged in the recycling of hazardous spent solvents are exempt recycling units under 40 C.F.R. § 261.6(c)(1) even though the sludge created in the distillation process is sent off-site to BIFs. The RCRA Orientation Manual does not support Rineco's position. As the Manual states, "[n]ot all hazardous wastes pose the same degree of hazard when recycled," and "[w]hile RCRA specifically exempts some wastes when recycled, some recycling processes may still pose enough of a hazard to warrant some degree of regulation." It may be true that EPA has concluded that certain unrefined waste-derived fuels and oils from petroleum refineries may justify exemption from RCRA Subtitle C, but EPA also has concluded that "[t]he process of recycling hazardous waste by burning it for energy recovery may pose significant air emission hazards. Therefore, EPA [has] established specific operating standards for units burning hazardous waste for energy recovery." Rineco, it should be noted, does not treat a single predictable pre-distillation waste stream from a petroleum refinery, but rather more than 400 different types of hazardous waste containing variable levels of ignitability, corrosivity, reactivity, and toxicity.

recycling exemption for a second reason because substantial hazardous wastes that are treated in the TMW are destroyed by thermal treatment and not recycled in the TMW. With respect to such activity, EPA has stated:

> [W]e wish to clarify that materials being burned in incinerators or other thermal treatment devices, other than boilers and industrial furnaces, are considered to be "abandoned by being burned or incinerated" under § 261.2(a)(1)(ii), whether or not energy or material recovery also occurs .... In our view, any such burning (other than in boilers and industrial furnaces) is waste destruction subject to regulation either under Subpart O of Part 264 or Subpart O and P of Part 265. If energy or material recovery occurs, it is ancillary to the purpose of the unit–to destroy wastes by means of thermal treatment–and so does not alter the regulatory status of the device or the activity.

48 Fed.Reg. 14472, 14484, Proposed Rules, April 4, 1983.

Rineco claims that burning cannot occur in the TMW because the "materials are indirectly heated in an oxygen-depleted chamber." Rineco's use of the phrase "oxygen-depleted" is ambiguous, however, and Rineco has provided no actual evidence that oxygen is absent from the TMW. Carl Wikstrom, Director of Research and Development for Rineco, only states that the materials are heated in an "oxygen-depleted chamber via an external heat source to break the adhesive bonds of the materials that are attached to the surface of the metal." In contrast, the TMW Patent indicates that waste materials are placed in an oxygen limited chamber, not an oxygen depleted chamber. The Patent states:

> The feed hopper provides the waste material to a first chamber through an airlock. The airlock, for some embodiments, is a knife gate, which largely isolates the first chamber from the feed hopper. The airlock limits air infusion into the first chamber, which is, for some embodiments, a sub-ambient pressure chamber. This isolation removes dependence on a dynamic seal. Also, the improved seals limit or prevent appreciable influx of air into the system, thereby reducing the chances for unplanned oxidation and also reducing the amount of non-condensable gases that flow through the system. . . . For some embodiments, an inerting gas (e.g. carbon dioxide, nitrogen, etc.) is injected into the airlock to displace air or other

oxidizing agents. This reduces the oxidation that can occur in the subsequent stages of the waste processing system.

Rineco's own documentation evidences destruction or burning of materials in the TMW. On December 28, 2005, EPA asked Rineco to "complete the attached table regarding volumes of waste managed at your facility for 2003, 2004 and 2005." EPA provided a table, based on Rineco's description of the TMW, showing yearly volume of hazardous waste received (liquid and solid phases), yearly volume into the TMW, yearly volume from the TMW divided in six outputs (water, oil, char, metal, vapors and inerts), and yearly volume into and out of the cryogenic unit. In a letter to EPA dated January 17, 2006, Rineco stated that its responses to the table were based on pounds, the numbers provided were Rineco's "best estimate," and the vapor and inerts categories were combined because Rineco was unable to separate them. The United States notes that the table showed that between 2003 and 2005, of the approximately 18.7 million lbs. of waste fed into the TMW annually, more than 2.6 million lbs. or at least 13.9% was unaccounted for, *i.e.* disposed of, burned, or incinerated in the treatment process, and that during the same period approximately 2 million lbs. or 10.7% of the output from the TMW was vapor/inerts, which are vented to the TOU where they are destroyed through burning and incineration. The United States notes as well that the presence of more than 4.4 million lbs. or at least 23.5% char indicates that the destruction of organic materials takes place in the TMW.[15]

Rineco does not specifically dispute the above percentages but contends that the table

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[15] Rineco proffers as "newly discovered evidence" a declaration from Dr. W. Roy Penney, a Professor in the Department of Chemical Engineering at the University of Arkansas, who stated that "complete combustion in the TMW is impossible." Dr. Penney does not, however, conclude that *no* combustion occurs in the TMW and he does not dispute that combustion and destruction occurs in the TOU. Rineco has also proffered a declaration from an attorney, David E. Polter, who essentially opines on the legal issues in this matter. However, the Court will not consider for purposes of today's decision legal opinions that "attempt to tell the court what result to reach." *Dow Corning Corp. v. Safety National Cas. Corp.*, 335 F.3d 742, 751-52 (8th Cir. 2003).

"does not reflect all of the materials exiting the TMW and, thus, any attempt to create a mass-balance report from this information is fatally flawed." Rineco states that "[i]mportantly, the chart does not reflect the amount of solids (other than char and metal) exiting the unit" and that "[t]herefore, the [United States'] allegations that 13.9% of the materials placed into the TMW are destroyed based on the numbers in the January 2006 chart are just plain wrong and misleading to the Court."

As previously noted, Rineco's claim that its table "does not reflect all of the materials exiting the TMW" and that its own Mass Balance Reports "are incomplete and inaccurate" fails to create a genuine issue of material fact concerning the evidence indicating that some 13.9% of the materials are burned or destroyed in the TMW. In its January 17th response to EPA's information request, Rineco made no mention that the six outputs from the TMW did not reflect the total output from the TMW and Rineco did not correct the table to add an output for "solids (other than char and metal) exiting the unit." The United States argues that Rineco clearly did not do so because the "inerts" category on the table describes the same waste materials that Rineco is now calling "solids." Certainly, neither Rineco's Patent nor Rineco's Fuel Blending & Recycling Processes flow chart describe "solids (other than char and metal) exiting the unit" but they do identify "inerts." The Patent states "[t]he metal separation system handles non-volatile fractions, including char, metal, and nonmagnetic inert substances such as, for example, glass, gravel, soil, sand, etc," and Rineco's flow chart indicates that "char, metal, and inerts" are the only solid phase materials that exit the TMW. There is no separate reference to "solids" exiting the TMW.

In any case, it is undisputed that vapor from the TMW is vented to the TOU where it is

destroyed through burning and incineration.[16] Thus, a portion of inputs to the TMW are volatilized by the high temperature, vented to the TOU, and destroyed through burning and incineration. In addition, the presence of substantial char shows that the destruction of organic materials takes place in the TMW.[17] Accordingly, the exemption for the recycling process found at APCEC Regulation No. 23 § 261.6(c)(1) does not apply because certain of the organic hazardous wastes processed in the TMW are not recycled but instead are destroyed by thermal treatment.[18]

c.

For the foregoing reasons, the Court grants summary judgment to the United States on its First Claim for Relief under RCRA (Unauthorized Operation of RCRA Treatment Unit) as set forth in its original complaint.

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[16] As indicated in the Patent, "[t]he residual non-condensable vapors are directed to a thermal oxidizer unit through an exhauster. As is known in the art, the thermal oxidizer unit destroys air toxics and volatile organic compounds ["VOC"] that are discharged."

[17] On April 15-16, 2008, David Duster ("Duster"), an environmental scientist with EPA, conducted a RCRA focused compliance evaluation at the Rineco facility and documented that fugitive VOC emissions were escaping from the TMW and other units at the Rineco facility. Similarly, former Rineco employees Tallent, Cummock, and Patty testified to fires occurring at the TMW and to VOCs and particulates that were leaked and discharged from the TMW into the air at the Rineco facility. Rineco points to the testimony of David Crew ("Crew"), ADEQ's on-site inspector, but Crew only testified that "to the best of my knowledge," there has never been a fire in the TMW. Crew did, however, testify that there have been fugitive emission issues with regard to the TMW, and he also testified that the scrap metal is a by-product of the entire process of the TMW, not the primary process, and that he believed and continues to believe that the TMW requires a RCRA permit. Rineco claims the TMW is "designed" for recycling metal, but the possibility of recycling is mentioned only twice in the 13-page Patent, stating first that certain metal (which can be fairly large, e.g. whole cans, etc.) moving along on a conveyor belt that progresses beyond the field of a magnet "can be recycled or disposed" and, second, that the systems and processes described in the Patent "permit recycling of various materials, which would otherwise not be permitted." The word "disposal," in contrast, is referenced numerous times throughout the Patent, which, as previously noted, "relates generally to waste processing, and more particularly to systems and methods for processing heterogeneous waste materials."

[18] Rineco also references EPA's "A Citizen's Guide to Thermal Desorption" ("Guide"), which describes the use of thermal desorption under the supervision of EPA as a method to clean up pollution at Superfund sites stating that "[t]he dust and harmful chemicals are separated from the gases and disposed of safely. The clean soil is returned to the site." Rineco, however, neither returns "clean soil" to its facility nor disposes of the separated materials in a Subtitle C landfill and so the Guide is not applicable.

2.

The Court now turns to the United States' claim of unauthorized operation of RCRA treatment unit. The United States alleges that since 2003 Rineco has been an owner or operator of a unit for the storage of hazardous waste, without a required permit, in violation of section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10. Rineco, however, argues that it has a valid and effective RCRA permit for the storage of hazardous waste at its facility that covers hazardous waste related to the TMW.

Under APCEC Regulation No. 23 § 270.1(b), storage of hazardous waste by any person who has not applied for or received a RCRA permit is prohibited. Under RCRA section 1004(33), 42 U.S.C. § 6903(33), "[t]he term 'storage,' when used in connection with hazardous waste, means the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste." "Storage" is defined as "the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere." APCEC Regulation No. 23 § 260.10.

Rineco does not dispute that it is storing hazardous waste related to the TMW at its facility and it does not dispute that after shredding, waste materials are placed in totes which are stored near the shredders before treatment in the TMW. Rineco obtained its RCRA hazardous waste permit in August 1999 before it began operation of the TMW and the staging area of the totes for the TMW is not included in the existing permit. Thus, Rineco's failure to modify its existing RCRA permit to expressly include the hazardous waste storage areas related to the

TMW is a violation of Section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10.[19] Accordingly, the Court grants summary judgment to the United States on its Second Claim for Relief under RCRA (Unauthorized Operation of RCRA Storage Unit) as set forth in its original complaint.

3.

The Court now turns to the United States' claim of unauthorized operation of RCRA disposal unit. The United States alleges that since 2003 Rineco has been an owner or operator of a unit for the disposal of hazardous waste, without a required permit, in violation of section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and APCEC Regulation No. 23 §§ 270.1, 270.10. Rineco, however, argues that it does not dispose of any hazardous waste related to the TMW at its facility.

As set forth above, Rineco's January 17th table regarding volumes of waste managed at its facility for 2003, 2004 and 2005 shows that Rineco disposes of hazardous waste related to the TMW. Again, Rineco's claim that its table "does not reflect all of the materials exiting the TMW" fails to create a genuine issue of material fact in the face of the evidence indicating that some 13.9% of the materials are burned or destroyed in the TMW. In addition, Rineco does not dispute that vapor, one of the outputs from the TMW, is vented to the TOU for destruction, nor does Rineco controvert the findings of the recent EPA inspection by Duster or similar testimony from former Rineco employees Tallent, Cummock, and Patty that fugitive VOC air emissions are

[19] The Court agrees with the United States that the permit requirements apply to the staging area for the totes given that when material is waiting to be placed in the TMW, there are emissions that can occur that would otherwise not be occurring in the absence of the TMW.

"leaking" from the TMW and other units at the Rineco facility.

In addition to disposal occurring at the TMW itself, it is not disputed that char and other materials from the TMW are blended into HWDF and sent off-site to BIFs where it is burned and emitted into the atmosphere or disposed or "deposited" as a waste in a landfill after the burning process is completed. Rineco argues that in order for "disposal" to occur, RCRA regulations require that the disposal must take place on the land or water at the Rineco facility. The term "disposal" is not so limited, however, but encompasses "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters." 42 U.S.C. § 6903(3); APCEC Regulation No. 23 § 260.10. The mere act of sending waste off-site for disposal does not make a unit a disposal unit; rather, Rineco is engaged in the unauthorized operation of a disposal unit because it is incorporating the char into a fuel, and the char is ultimately discharged into the air or deposited in a landfill. Accordingly, the Court grants summary judgment to the United States on its Third Claim for Relief under RCRA (Unauthorized Operation of RCRA Disposal Unit) as set forth in its original complaint.

4.

The Court now turns to the United States' claim of failure to notify of hazardous waste activity. The United States alleges that Rineco has failed to file, with EPA or ADEQ, a notification of hazardous waste activity related to the TMW in compliance with Section 3010 of RCRA, 42 U.S.C. § 6930. Rineco, however, argues it submitted notification of its hazardous

waste activity related to the TMW to ADEQ as part of its Hazardous Waste Annual Reports for 2003, 2004, 2005, 2006, and 2007, noting that as to each report, it indicated that the facility was a recycler of hazardous waste, included hazardous wastes recycled in the TMW in the list of regulated hazardous wastes, and included hazardous wastes recycled in the TMW in the waste generation totals for the facility.

Section 3010 of RCRA requires Rineco to provide notice of the location and a general description of any treatment, storage or disposal activity conducted at the facility. 42 U.S.C. § 6930. Rineco's general reference on the RCRA Subtitle C Site Identification form that it is a recycler of hazardous waste and its reference to the hazardous wastes recycled in the TMW as well as its hazardous waste totals at the facility is not sufficient. Section 3010 requires the operator of a hazardous waste treatment, storage or disposal facility to file specific reports. *McClellan Ecological Seepage Situation v. Perry*, 47 F.3d 325, 329-330 n.7 (9th Cir. 1995). Rineco does not dispute that it has failed to file with EPA or ADEQ a notification of its hazardous waste activity expressly related to the TMW. Accordingly, the Court grants summary judgment to the United States on its Fourth Claim for Relief under RCRA (Failure to Notify of Hazardous Waste Activity) as set forth in its original complaint.

5.

The Court now turns to the United States' claim of failure to provide financial assurances. The United States alleges that Rineco has failed to establish financial assurance requirements for closure of the TMW and related storage units at the facility in violation of section 3004(a) of RCRA, 42 U.S.C. § 6924(a), and APCEC Regulation No. 23 § 264, Subpart H.

Rineco does not dispute that it has failed to establish financial assurances related to the TMW but instead contends that because the TMW is exempt from regulation, Rineco is not required to comply with financial assurances requirements for closure of the TMW. As set forth above, however, Rineco does not qualify for the recycling exemption in APCEC Regulation No. 23 § 261.6(c)(1). As a result, Rineco must establish financial assurances for the TMW.[20] Accordingly, the Court grants summary judgment to the United States on its Fifth Claim for Relief under RCRA (Failure to Provide Financial Assurances) as set forth in its original complaint.

C.

One final matter concerns Rineco's affirmative defenses. Rineco argues that if it is not entitled to summary judgment, genuine issues of fact on Rineco's affirmative defenses preclude the granting of summary judgment in favor of the United States, including whether EPA is equitably estopped from asserting claims against Rineco based on the decision of the delegated authority (*i.e.* ADEQ) that the TMW does not require a RCRA permit, whether EPA is exercising selective enforcement against Rineco, and whether Rineco is being denied equal protection. However, both Rineco and the United States have moved for summary judgment, those motions are ripe for consideration, and Rineco has not come forward with facts to support any of its affirmative defenses. Claims for equitable estoppel do not run against the federal government unless the party claiming estoppel establishes, among other things, that the government engaged

[20] During oral argument, Rineco acknowledged that the financial assurances argument turns on the exemption issue and that if the Court finds that the TMW is covered under RCRA, which the Court has today so done, then Rineco is required to establish financial assurances for the TMW.

in some sort of affirmative misconduct. *Miller v. U.S. Through Farmers Home Admin.*, 907 F.2d 80, 82-83 (8th Cir. 1990). To establish a prima facie claim of selective prosecution, a party must demonstrate that others similarly situated to it were not prosecuted and that the decision to enforce the law against it was motivated by discriminatory purpose. *United States v. Perry*, 152 F.3d 900, 903 (8th Cir. 1998). To establish a viable equal protection claim, Rineco must show that it was treated differently than similarly situated entities for purposes of the challenged government action. *Koscielski v. City of Minneapolis*, 435 F.3d 898, 901 (8th Cir. 2006). Rineco has shown no evidence of affirmative misconduct or discriminatory purpose by the United States to support its estoppel and selective prosecution claims, and Rineco has shown no evidence that similarly situated entities received favorable treatment so as to establish a viable equal protection claim. As Rineco has shown no evidence to support these or any other affirmative defenses, summary judgment in favor of the United States is not precluded.[21]

III.

For the foregoing reasons, the Court grants the United States' motion for summary judgment [doc.#40] as to liability on each of the five claims asserted in its original complaint and denies Rineco's motion for summary judgment [doc.#13]. This matter will proceed as to any appropriate civil penalties and as to the three remaining claims in the United States' amended

[21] Rineco alludes to seeking additional discovery on its affirmative defenses but a party opposing summary judgment who believes that he or she has not had adequate opportunity to conduct discovery must seek relief pursuant to Fed.R.Civ.P. 56(f), which requires that party to show what specific facts further discovery might unveil. *United States v. Casino Magic Corp.*, 293 F.3d 419, 426 (8th Cir. 2002) (citations omitted). This, Rineco has failed to do. In addition, during a telephone conference held on November 19, 2008, Rineco agreed that discovery could be stayed until such time as the Court ruled on the parties' cross-motions for summary judgment on liability.

and supplemental complaint.[22]

IT IS SO ORDERED this 4th day of March 2009.

/s/Susan Webber Wright

UNITED STATES DISTRICT JUDGE

[22] As noted in the November 24th Order, the Court will consider for purposes of determining any appropriate civil penalties the seriousness of the violation, any good faith efforts to comply, the harm caused by the violation, any economic benefit derived from noncompliance, the violator's ability to pay, the government's conduct, and the clarity of the obligation involved. *United States v. Ekco Housewares, Inc.*, 62 F.3d 806, 815 (6th Cir. 1995). With respect to economic benefit, the Court reiterates that the goal of the economic benefit analysis is to prevent a violator from profiting from its wrongdoing, level the economic playing field, and prevent violators from gaining an unfair competitive advantage. *United States v. Municipal Authority of Union Township*, 150 F.3d 259, 263-64 (3rd Cir. 1998) (citation omitted). *See also Pound v. Airosol Company, Inc.*, 498 F.3d 1089, 1099-1100 (10th Cir. 2007) (in determining economic benefit of noncompliance under Clean Air Act ("CAA"), "the better argument" is that "any profits realized through the sale, or offer of sale, of a prohibited product ought to be included when assessing the economic benefit of a CCA violation, the rationale being that one ought not to profit from one's wrongful conduct;" rejecting the argument that "the economic benefit is more properly measured by considering the costs that it would have incurred to comply with the CAA (*i.e.*, the cost of reformulation)"); *Ekco Housewares*, 62 F.3d at 816 (district court did not abuse its discretion in determining that the amount of the RCRA penalty could be based on the economic benefit gained through noncompliance, including cost savings realized by noncompliance, and district court properly considered the deterrence effect not just on defendant but on the regulated community as a whole). Thus, while it may be that the economic benefits calculation ideally begins with the costs that should have been spent to achieve compliance, *Airosol Company*, 498 F.3d at 1100, the Court will consider all relevant documentation that could lead to a reasonable approximation of economic benefit to Rineco during the period that the TMW has been operating without a permit, including: (1) the cost of applying for and obtaining a RCRA permit; (2) TMW profit from the start of its operation to the present; (3) the pollution control costs associated with the RCRA permit; and (4) other benefits such as any competitive advantage Rineco has obtained by charging generators a lower price to dispose of waste in a non-regulated process.

ATTACHMENT

TRADEBE BROCHURE

TRADEBE

Sustainability
At Work

SOLID DISTILLATION SYSTEM

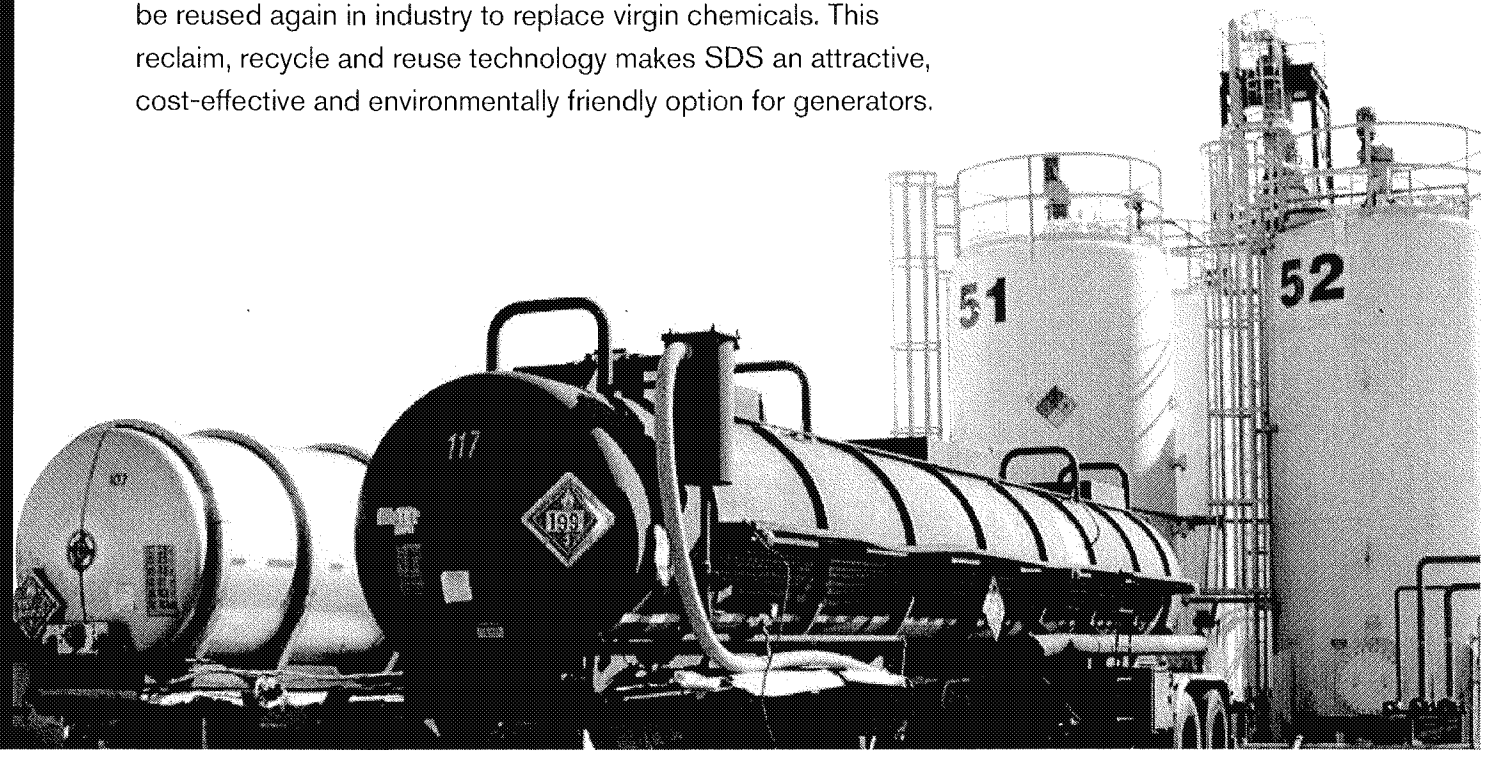
SUSTAINABLE WASTE MANAGEMENT

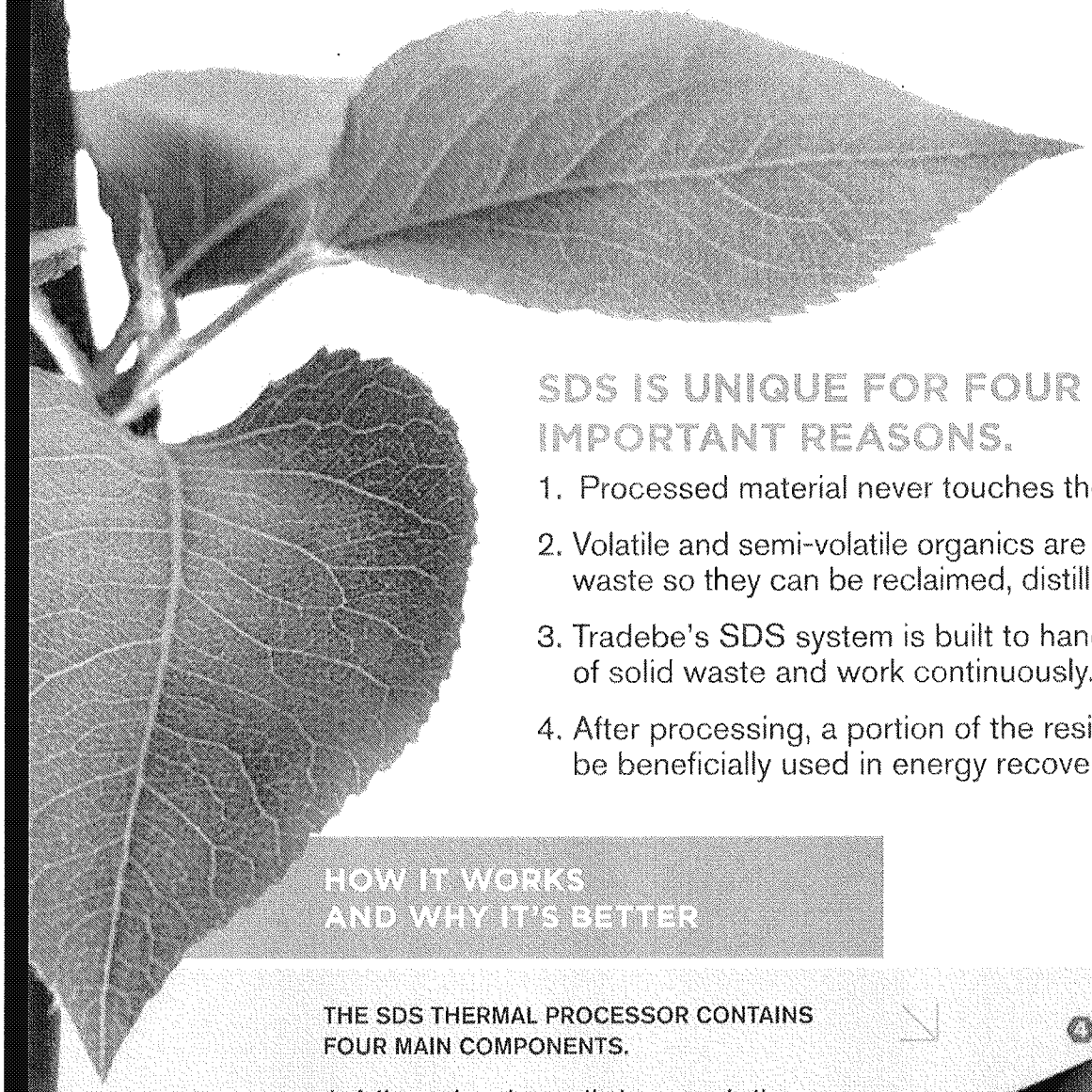
Tradebe's Solid Distillation System (SDS) is a positive step forward in waste recycling technology and a new, cost-effective way for generators to recycle their organic solid waste.

Before SDS, most solid waste was incinerated in a process designed to destroy its hazardous organic content by driving off volatiles and burning excess gases.

After incineration, residual materials were landfilled. Now, SDS offers a more responsible solution. Wastes such as paints, resins, polymers, solvent-soaked rags, and refinery wastes have their hazardous organic content removed and recycled so it can be reused again in industry to replace virgin chemicals. This reclaim, recycle and reuse technology makes SDS an attractive, cost-effective and environmentally friendly option for generators.

SDS is an attractive, cost-effective and environmentally friendly option for generators.





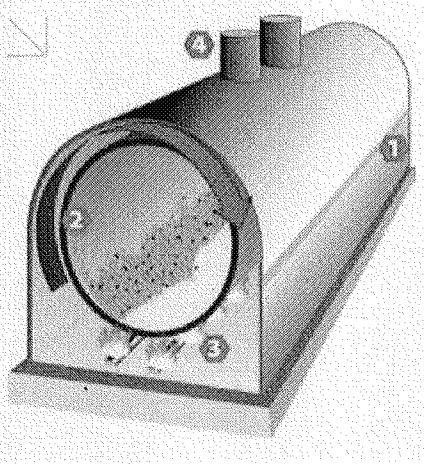
SDS IS UNIQUE FOR FOUR IMPORTANT REASONS.

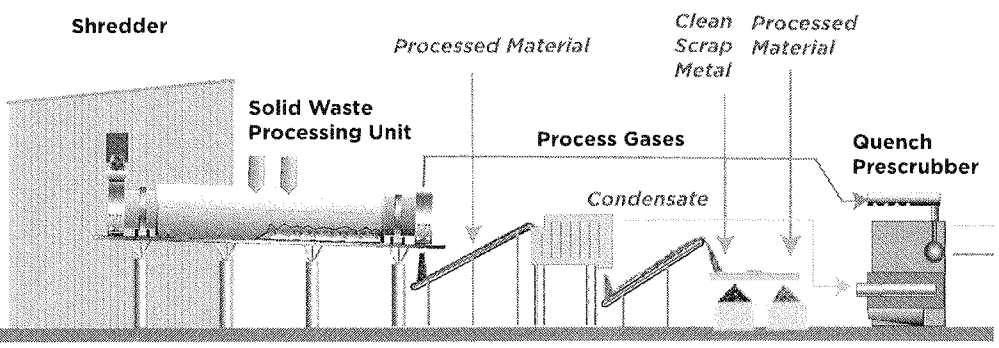
1. Processed material never touches the heat source.
2. Volatile and semi-volatile organics are "baked out" of the waste so they can be reclaimed, distilled and recycled.
3. Tradebe's SDS system is built to handle large volumes of solid waste and work continuously.
4. After processing, a portion of the residual material can be beneficially used in energy recovery.

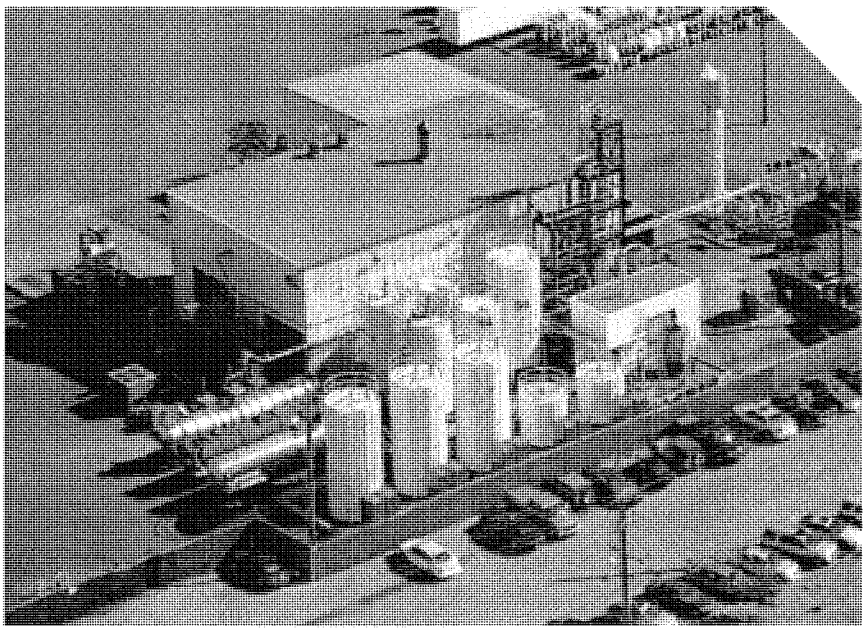
HOW IT WORKS AND WHY IT'S BETTER

THE SDS THERMAL PROCESSOR CONTAINS FOUR MAIN COMPONENTS.

1. *A thermal enclosure that surrounds the entire process*
2. *A rotating waste processing chamber located inside the thermal enclosure*
3. *An indirect heating system located under the rotating chamber*
4. *A heat exhaust system that reclaims and reuses process heat*







RESPONSIBLE MANAGEMENT, START TO FINISH

The waste typically arrives in metal drums. Tradebe chemists sample and profile each shipment to ensure compatibility with the SDS process.

Once accepted, the drums containing waste are processed through a powerful shredder that reduces everything to a uniform size. The shredded waste is fed into an entry valve at the top of the long, oven-like rotating process chamber. The anaerobic atmosphere inside the process chamber is designed to prevent the oxidation of hydrocarbon components as they are driven from the wastes.

As wastes tumble down the rotating cylinder, they are indirectly heated to very high temperatures; the heat is applied to the outside of the rotating chamber so the material on the inside is never exposed to direct flame.

The high internal temperatures drive all volatile and semi-volatile organic chemicals from the solids. The organic components are collected, condensed, and sent to an oil/water separator as a water/organic mixture to be processed.

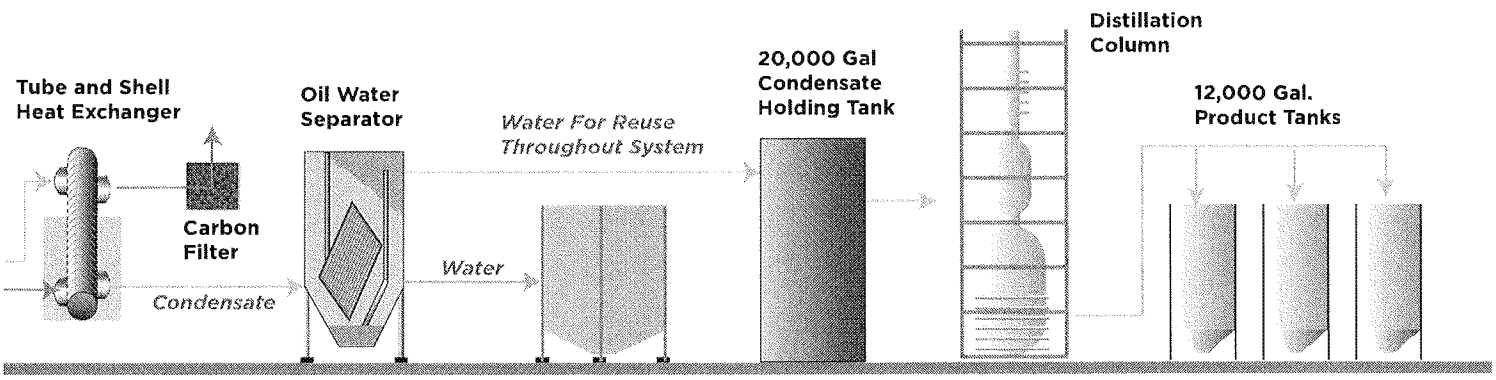
While SDS is a fully automated technology, skilled on-site personnel, working from a control center, monitor the process every step of the way to ensure a high quality end product. From the control terminal the operator can visually monitor and operate every key element in the process.

WHAT WASTES CAN BE PROCESSED?

Virtually any organic solid waste can be processed through SDS, including paint waste, solvent soaked rags, resins, polymers, production debris, refinery waste and discarded commercial products, and many more similar wastes.

Once waste is processed through SDS, the generator receives a Certificate of Recycling that affirms the waste has been recycled. The generator then has no further liability. The Certificate of Recycling is also beneficial for generators with ISO 14001 programs and Environmental Management System recycling goals.

Returning potentially hazardous chemicals to industry for reuse, rather than simply wasting their valuable organic content through incineration, is what Tradebe's responsible waste management program is all about. SDS technology achieves waste minimization and recycling goals by transforming waste into valuable recycled products.



SDS BENEFITS

- *SDS can effectively process virtually any solid organic hazardous waste.*
- *SDS helps generators meet Environmental Management Systems objectives.*
- *SDS prevents pollution while promoting recycling and reuse.*
- *SDS helps customers meet US EPA's RCRA Conservation Challenge.*
- *SDS eliminates the release of hazardous constituents into the atmosphere.*
- *SDS conserves energy while keeping waste out of the environment.*
- *SDS reclaims valuable constituents found in solid hazardous waste and reduces the demand for virgin chemicals.*

Solid Distillation System (SDS) is a positive step forward in waste recycling technology. SDS offers customers an effective and cost-efficient method for recycling organic solid waste that might otherwise be incinerated or landfilled. SDS extracts the organics from solid hazardous waste and transforms them into reusable products. SDS recycled products are being beneficially used now in numerous industries throughout the country in place of virgin chemicals.

SDS...
New technology for a new world of waste recycling.

Sustainability At Work

TRADEBE

Tradebe Treatment & Recycling, LLC
A Division of Tradebe Environmental Services, LLC

4343 Kennedy Avenue
East Chicago, IN 46312

Toll Free Nationwide Customer Service:
(800) 388-7242

Northeast Customer Service and Emergency Response:
(888) 276-0887

www.tradebeusa.com

ATTACHMENT

CONSENT AGREEMENT WITH TDX

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6
DALLAS, TEXAS

FILED
2012 OCT -4 AM 9:20
REGIONAL HEARING CLERK
EPA REGION VI

IN THE MATTER OF:	)	
US ECOLOGY TEXAS, INC., and TD*X ASSOCIATES LP	)	DOCKET NOS. RCRA-06-2012-0936 and RCRA-06-2012-0937
RESPONDENTS	)	

CONSENT AGREEMENT AND FINAL ORDER

The Director of the Compliance Assurance and Enforcement Division of the United States Environmental Protection Agency (EPA), Region 6 (Complainant) and US Ecology Texas, Inc. and TD*X Associates L.P. (Respondents) in the above-referenced proceeding, hereby agree to resolve this matter through the issuance of this Consent Agreement and Final Order (CAFO).

I. PRELIMINARY STATEMENT

1. This proceeding for the assessment of civil penalties and the issuance of a compliance order is brought by EPA pursuant to Section 3008 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6928, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), and is simultaneously commenced and concluded through the issuance of this Consent Agreement and Final Order (CAFO) pursuant to 40 C.F.R. §§ 22.13(b), 22.18(b)(2) and (3), and 22.37.

2. Notice of this action was given to the State of Texas prior to the issuance of this CAFO, as required by Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2).

3. For the purposes of this proceeding, the Respondents admit the jurisdictional allegations contained herein; however, the Respondents neither admit nor deny the specific factual allegations contained in this CAFO.

4. The Respondents explicitly waive any right to contest the allegations and their right to appeal the proposed Final Order set forth therein, and waive all defenses which have been raised or could have been raised to the claims set forth in the CAFO.

5. Compliance with all the terms and conditions of this CAFO shall resolve only those violations which are set forth herein.

6. The Respondents consent to the issuance of the CAFO hereinafter recited and consent to the issuance of the Compliance Order contained therein.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

A. PRELIMINARY ALLEGATIONS

7. US Ecology Texas, Inc. (USET) is a corporation incorporated under the laws of the State of Delaware and authorized to do business in the State of Texas.

8. TD*X Associates LP (TD*X) is a limited partnership authorized to do business in the State of Texas.

9. "Person" is defined in 30 T.A.C. § 3.2(25) [40 C.F.R. §§ 260.10 and 270.2], and Section 1004(5) of RCRA, 42 U.S.C. § 6903(15) as "an individual, corporation, organization, government or government subdivision or agency, business trust, partnership, association, or any other legal entity."

10. The Respondent USET is a "person" as defined by 30 T.A.C. § 3.2 (25) [40 C.F.R. § 260.10], and Section 1004 (15) of RCRA, 42 U.S.C. § 6903(15).

11. The Respondent TD*X is a "person" as defined by 30 T.A.C. § 3.2 (25) [40 C.F.R. § 260.10], and Section 1004 (15) of RCRA, 42 U.S.C. § 6903 (15).

12. "Owner" is defined in 30 T.A.C. § 335.1(108) [40 C.F.R. § 260.10] as "the person who owns a facility or part of a facility."

13. "Operator" is defined in 30 T.A.C. § 335.1(107) [40 C.F.R. § 260.10] as "the person responsible for the overall operation of a facility".

14. "Owner or operator" is defined in 40 C.F.R. § 270.2 as "the owner or operator of any facility or activity subject to regulation under RCRA."

15. "Facility" is defined in 30 T.A.C. § 335.1(59) [40 C.F.R. § 260.10] as meaning "all contiguous land, and structures, other appurtenances, and improvements on the land, used for storing, processing, or disposing of municipal hazardous waste or industrial solid waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them)."

16. The Respondent USET owns and operates a hazardous waste treatment, storage, and disposal (TSD) facility located at 3327 County Road 69, Robstown, TX 78380, EPA I.D. No. TXD069452340, Permit No. HW-50052-001.

17. The TSD identified in Paragraph 16 is a "facility" as that term is defined in 30 T.A.C. § 335.1(59) [40 C.F.R. § 260.10].

18. The Respondent USET is the "owner" and/or "operator" of the facility identified in Paragraph 16, as those terms are defined in 30 TAC § 335.1(107) & (108) [40 C.F.R. § 260.10] and 40 C.F.R. § 270.2.

19. An oil reclamation unit is located at the facility identified in Paragraph 16.

20. The Respondent TD*X owns and operates a thermal desorption unit (TDU), as well as the feed preparation system that includes a shaker tank (T-30), three mix tanks (T-31, T-32, and T-33), a centrifuge, and a surge tank (T-34) at the oil reclamation unit.

21. The Respondent TD*X began operating the TDU and related equipment on or about June 15, 2008.

22. On or about June 8 – 11, 2010, June 14 – 17, 2010, and August 9 – 11, 2010, the Respondent USET's TSD facility and the oil reclamation unit were inspected by representatives of EPA pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927.

B. VIOLATIONS

Count One – Processing Hazardous Waste Without a Permit or Interim Status

23. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment),[1] storage, or disposal of hazardous waste.

24. "Hazardous waste" is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as "any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*"

25. "Recyclable materials" is defined in 30 T.A.C. §335.24(a) [40 C.F.R. § 261.6(a)(1)] as "hazardous wastes that are recycled".

[1] The Texas Administrative Code uses the term "processing" instead of "treatment". The term "processing" as used by Texas is essentially equivalent to the term "treatment" as used in the federal statute and regulations.

26. The Respondent USET receives "hazardous waste" from off-site generators, as that term is defined by 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

27. The Respondent USET receives "recyclable materials" from off-site generators, as that term is defined by 30 T.A.C. § 335.24(a) [40 C.F.R. § 261.6(a)(1)].

28. Recyclable materials destined for oil reclamation are transferred to the Respondent TD*X by the Respondent USET.

29. Processing (treatment) is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] as follows:

> The extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of solid waste or hazardous waste, designed to change the physical, chemical, or biological character or composition of any solid waste or hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The transfer of solid waste for reuse or disposal as used in this definition does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the executive director determines that regulation of such activity is necessary to protect human health or the environment, the definition of processing does not include activities relating to those materials exempted by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*, as amended.

30. On various dates after June 15, 2008, certain recyclable materials were processed in the tanks identified in Paragraph 20.

31. The recyclable materials identified in Paragraph 30 did not meet the exemption in 30 T.A.C. § 335.24(c)(4)(C) [40 C.F.R. § 261.6(a)(3)(iv)(C) because the hazardous wastes were not "oil-bearing hazardous wastes from petroleum refining, production, and transportation practices."

32. The Respondent TD*X processed (treated) hazardous waste as that term is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] in the tanks identified in Paragraph 20.

33. To date, neither the Respondent USED nor Respondent TD*X has applied for nor received a RCRA permit or interim status to allow the processing (treatment) of hazardous waste in the tanks identified in Paragraph 20.

34. Therefore, the Respondent USET and the Respondent TD*X have violated Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by processing (treating) hazardous waste without a RCRA permit or interim status.

Count Two – Processing Hazardous Waste Without a Permit or Interim Status

35. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment), storage, or disposal of hazardous waste.

36. "Hazardous waste" is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as "any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*"

37. "Recyclable materials" is defined in 30 T.A.C. §335.24(a) [40 C.F.R. § 261.6(a)(1)] as "hazardous wastes that are recycled".

38. The Respondent USET receives "hazardous waste" from off-site generators, as that term is defined by 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

39. The Respondent USET receives "recyclable materials" from off-site generators, as that term is defined by 30 T.A.C. § 335.24(a) [40 C.F.R. § 261.6(a)(1)].

40. Recyclable materials destined for oil reclamation are transferred to the Respondent TD*X by the Respondent USET.

41. On various dates after June 15, 2008, certain recyclable materials were fed into the TDU that did not meet the exemption in 30 T.A.C. § 335.24(c)(4)(C) [40 C.F.R. § 261.6(a)(3)(iv)(C) because the hazardous wastes were not "oil-bearing hazardous wastes from petroleum refining, production, and transportation practices."

42. Processing (treatment) is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] as follows:

> The extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of solid waste or hazardous waste, designed to change the physical, chemical, or biological character or composition of any solid waste or hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The transfer of solid waste for reuse or disposal as used in this definition does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the executive director determines that regulation of such activity is necessary to protect human health or the environment, the definition of processing does not include activities relating to those materials exempted by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*, as amended.

43. Thermal processing (thermal treatment) is defined in 30 T.A.C. § 335.1(149) [40 C.F.R. § 260.10] as follows:

> the processing of solid waste or hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the solid waste or hazardous waste. Examples of thermal processing are incineration, molten salt, pyrolysis, calcination, wet air

oxidation, and microwave discharge. (See also "incinerator" and "open burning.").

44. The TDU uses heat from an indirect heated rotary dryer to separate the organic constituents from the hazardous waste feed material. A nitrogen carrier gas is used to transfer the vapor phase organic constituents to a gas treatment system. The oil is recovered by condensing vapor phase organic constituents in the gas treatment system. A portion of the TDU's recirculating nitrogen carrier gas, along with non-condensable gases, is vented, filtered, and then injected into the combustion chamber of the TDU, where it is burned.

45. The separation of the organic constituents from the hazardous waste in the TDU's indirectly heated rotary dryer constitutes thermal processing (thermal treatment) as that term is defined in 30 T.A.C. § 335.1(149) [40 C.F.R. § 260.10].

46. To date, neither the Respondent USET nor Respondent TD*X has applied for nor received a RCRA permit or interim status to allow the thermal processing (thermal treatment) of hazardous waste in the TDU.

47. Therefore, the Respondent USET and the Respondent TD*X have violated Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by thermally processing (thermally treating) hazardous waste without a RCRA permit or interim status.

Count Three - Processing Hazardous Waste Without a Permit or Interim Status

48. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment), storage, or disposal of hazardous waste.

49. "Hazardous waste" is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as "any solid waste identified or listed as a hazardous waste by the administrator of the United States

Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*"

50. The Respondent USET receives "hazardous waste" from off-site generators, as that term is defined by 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

51. Hazardous wastes destined for oil reclamation are transferred to the Respondent TD*X by the Respondent USET.

52. On various dates after June 15, 2008, hazardous wastes were fed into the TDU.

53. The TDU uses heat from an indirect heated rotary dryer to separate the organic constituents from the hazardous waste feed material. A nitrogen carrier gas is used to transfer the vapor phase organic constituents to a gas treatment system. The oil is recovered by condensing vapor phase organic constituents in the gas treatment system. A portion of the TDU's recirculating nitrogen carrier gas, along with non-condensable gases, is vented, filtered, and then injected into the combustion chamber of the TDU, where it is burned.

54. Processing (treatment) is defined in 30 T.A.C. § 335.1(122) [40 C.F.R. § 260.10] as follows:

> The extraction of materials, transfer, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal, including the treatment or neutralization of solid waste or hazardous waste, designed to change the physical, chemical, or biological character or composition of any solid waste or hazardous waste so as to neutralize such waste, or so as to recover energy or material from the waste or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. The transfer of solid waste for reuse or disposal as used in this definition does not include the actions of a transporter in conveying or transporting solid waste by truck, ship, pipeline, or other means. Unless the executive director determines that regulation of such activity is necessary to protect human health or the environment, the definition of processing does not include activities relating to those materials exempted by the administrator of the United States Environmental Protection Agency in

> accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*, as amended.

55. Thermal processing (thermal treatment) is defined in 30 T.A.C. § 335.1(149) [40 C.F.R. § 260.10] as follows:

> the processing of solid waste or hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the solid waste or hazardous waste. Examples of thermal processing are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning.")

56. The burning of gases in the TDU's combustion chamber constitutes thermal processing (thermal treatment) as that term is defined in 30 T.A.C. § 335.1(149) [40 C.F.R. § 260.10].

57. The combustion chamber of the TDU is an enclosed device that uses controlled flame combustion.

58. The combustion chamber of the TDU does not meet the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; nor meets the definition of infrared incinerator or plasma arc incinerator."

59. To date, neither the Respondent USET nor Respondent TD*X has applied for nor received a RCRA permit or interim status to allow the thermal processing (thermal treatment) of hazardous waste in the combustion chamber of the TDU.

60. Therefore, the Respondent USET and the Respondent TD*X have violated and continue to violate Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e) and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by thermally processing (thermally treating) hazardous waste without a RCRA permit or interim status.

Count Four – Storing Hazardous Waste Without a Permit Or Interim Status

61. Pursuant to Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)], a RCRA permit or interim status is required for the processing (treatment), storage, or disposal of hazardous waste.

62. "Storage" is defined in 30 T.A.C. § 335.1(143) [40 C.F.R. § 260.10] as "the holding of solid waste for a temporary period, at the end of which the waste is processed, disposed of, recycled, or stored elsewhere."

63. Between on or about March 9, 2010, and June 11, 2010, the Respondent USET stored roll-off boxes in the area called the "Y" at the facility.

64. The roll-off boxes identified in Paragraph 63 contained material which had entered the oil reclamation process and was being temporarily staged before undergoing subsequent stages of the reclamation process. The Respondent USET discontinued the use of the area called the "Y" for this purpose.

65. "Hazardous waste" is defined in 30 T.A.C. § 335.1(69) [40 C.F.R. § 261.3] as "any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§ 6901 *et seq.*"

66. The roll-off boxes identified in Paragraph 63 contained "hazardous waste" as that term is defined in T.A.C. § 335.1(69) [40 C.F.R. § 261.3].

67. The Respondent USET had not applied for nor received a RCRA permit or interim status to allow the storage of hazardous waste at the area called the "Y".

68. Therefore, the Respondent USET has violated Sections 3005(a) and (e) of RCRA, 42 U.S.C. §§ 6925(a) and (e), and 30 T.A.C. § 335.43(a) [40 C.F.R. § 270.1(b)] by storing hazardous waste without a RCRA permit or interim status.

III. COMPLIANCE ORDER

69. Pursuant to Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), the Respondents are hereby **ORDERED** to take the following actions and provide evidence of compliance within the time period specified below:

A. Interim Operating Requirements

1. As of the effective date of this CAFO, feedstock for the oil reclamation unit shall consist only of non-hazardous waste, and oil-bearing hazardous waste from petroleum refining, production, and transportation practices. Oil-bearing hazardous waste from petroleum refining, production, or transportation practices includes the following listed hazardous waste from specific Petroleum Refining Sources (K049, K050, K051, K052, K169, and K170). Also acceptable is oil-bearing hazardous waste from processes which meet the definition of the following Standard Industrial Classification (SIC) codes and corresponding North American Industry Classification System (NAICS) codes (i.e., petroleum refining, production, and transportation practices) as follows:

SIC Code	SIC Description	NAICS Code	NAICS Title
1311	Crude Petroleum & Natural Gas	211111	Crude Petroleum and Natural Gas Extraction
1321	Natural Gas Liquids	211112	Natural Gas Liquid Extraction
1381	Drilling Oil & Gas Wells	213111	Drilling Oil and Gas Wells
1382	Oil & Gas Field Exploration Services (except geophysical mapping & surveying)	213112	Support Activities for Oil & Gas Operations
1389	Oil and Gas Field Services, NEC (except construction of field gathering lines, site	213112	Support Activities for Oil and Gas Operations

	preparation and related construction activities performed on a contract or fee basis)		
2911	Petroleum Refining	324110	Petroleum Refineries
4612	Crude Petroleum Pipelines	486110	Pipeline Transportation of Crude Oil
4613	Refined Petroleum Pipelines	486910	Pipeline Transportation of Refined Petroleum Products
4789	Transportation Services, NEC (pipeline terminals and stockyards for transportation)	488999	All Other Support Activities for Transportation
4922	Natural Gas Transmission	486210	Pipeline Transportation of Natural Gas
4923	Natural Gas Transmission and Distribution (distribution)	221210	Natural Gas Distribution
4923	Natural Gas Transmission and Distribution (transmission)	486210	Pipeline Transportation of Natural Gas
5171	Petroleum Bulk Stations and Terminals (except petroleum sold via retail method)	488999	All Other Support Activities for Transportation
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals (merchant wholesalers)	424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)

2. Using feedstock from processes meeting the definition of the aforementioned SIC/NAICS Codes does not constitute compliance with 40 C.F.R. § 261.6(a)(3)(iv)(C) or this CAFO. The Respondents are required to make a separate determination whether the hazardous waste in question is "oil-bearing," and that the hazardous waste was originally generated from petroleum refining, production, or transportation practices.

3. As of the effective date of this CAFO, when the dryer feed is on, the Respondents shall operate the TDU in accordance with the interim operating parameters set forth in Appendix 1, Table A, which is attached and incorporated by reference into this CAFO. The Blending Protocols referenced in Appendix 1 is attached as Appendix 2, and incorporated by reference into this CAFO.

4. As of the effective date of this CAFO, Respondents shall comply with the Start-Up, Shutdown, and Malfunction Plan (SSM Plan) (CDT Plan, Appendix E). The Compliance Demonstration Test (CDT) Plan is attached as Appendix 3 and incorporated by reference into the CAFO.

5. Within sixty (60) days of the effective date of this CAFO, the Respondents shall conduct a tune-up of the external combustion chamber of the TDU in accordance with the following requirements:

a. As applicable, inspect the burner and clean or replace any components of the burner as necessary. The burner inspection may be delayed until the next scheduled or unscheduled unit shutdown.

b. 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 specification.

c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.

d. Optimize total emissions of carbon monoxide (CO). This optimization should be consistent with the manufacturer's specifications, if available.

e. 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.

f. Perform sampling and analysis of both dryer furnace stacks using Method TO-15, "Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)". If the total

organic matter result is greater than 10 ppmV for either stack, the analysis shall include speciation of the gas. This information shall be included in the report required in Paragraph 69.A.5.g below.

g. Maintain on-site a report documenting the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume present, measured before and after the adjustments of the external combustion chamber of the TDU, and a description of any corrective actions taken as part of the combustion adjustment.

h. Subsequent tune-ups shall be conducted annually until the TDU is reconfigured.

6. Within sixty (60) days of the effective date of this CAFO, the Respondents shall conduct a fuel specification analysis of the purge vent gas for mercury and document that it does not exceed the maximum concentration of 40 micrograms/cubic meter of mercury using test methods ASTM D5954, ASTM D6350, ISO 6978-1:2003(E), or ISO 6978-2:2003(E), or an alternate test method approved by EPA. If the concentration of mercury exceeds 40 micrograms/cubic meter, the Respondents shall immediately notify EPA.

7. Within ninety (90) days of the effective date of this CAFO, the Respondents shall install, monitor, and operate an automatic hazardous waste feed cutoff (AWFCO) at the TDU in accordance with 40 C.F.R. § 63.1206(c)(3)(ii) and (iv) that immediately and automatically cuts off the hazardous waste feed when any component of the AWFCO system fails, or when one or more of the interim operating parameters set forth in Appendix 1, Table A that are designated as AWFCO parameters are not met. The Respondents shall also comply with the investigation, recordkeeping, testing, and reporting requirements of 40 C.F.R. § 63.1206(c)(3)(v), (vi) and (vii).

8. Within one year of the effective date of this CAFO, the Respondents shall reconfigure the TDU so that the non-condensable vent gases are routed to a thermal oxidizing unit (TOU)

instead of the combustion chamber of the TDU (Reconfigured TDU). After reconfiguration, fuel for the TDU is limited to natural gas and propane.

9. The Respondents shall operate the Reconfigured TDU during the shakedown period in accordance with the operating parameters limits set forth in Appendix 1, Table B when the dryer feed is on. The Respondent shall not operate the Reconfigured TDU more than 720 hours (including the shakedown period and the Compliance Demonstration Test). The Respondents shall keep records of the hours of operation during the shakedown period. The Respondents shall operate a continuous emissions monitor system (CEMS) for carbon monoxide (CO) for the TOU during the shakedown period. The Respondents shall operate the Reconfigured TOU in a manner that the hourly rolling averages for CO are not exceeded. The rolling averages shall be calculated in accordance with 40 C.F.R. §§ 63.1209(a)(6) and 63.1209(b)(5).

10. During the shakedown period, the Respondents shall monitor and operate an automatic hazardous waste feed cutoff (AWFCO) at the Reconfigured TDU in accordance with 40 C.F.R. § 63.1206(c)(ii) and (iv) that immediately and automatically cuts off the hazardous waste feed when any component of the AWFCO system fails, or when one or more of the operating parameter limits set forth in Appendix 1, Table B that are designated as AWFCO parameters are not met. The Respondents shall also comply with the investigation, recordkeeping, testing, and reporting requirements of 40 C.F.R. § 63.1206(c)(3) (v), (vi) and (vii).

11. The Respondents shall conduct a test measuring the concentration of CO in the exhaust gases from the TOU. This test shall include three one-hour runs during which the TDU is operated on oil-bearing hazardous waste. The emissions from the TOU stack shall be monitored for carbon monoxide and oxygen using EPA Method 10. The emissions shall be

demonstrated to be less than 100 ppmV CO corrected to 7% O_2 in each run. The test frequency shall be once during each six-month period, January 1 – June 30 and July 1 - December 31, said time period to commence after conducting the CDT and continuing until the TCEQ issues a RCRA Subpart X permit for the Reconfigured TDU. Within forty-five (45) days after conducting the test, the Respondents shall submit a test report to EPA summarizing the test results. The time periods for conducting the test may be changed to once during each twelve (12) month calendar period, January 1 - December 31, if the Respondents submit to EPA, with a copy to TCEQ, a detailed feed stream analysis plan that characterizes the waste received by the facility, and EPA approves the plan. The detailed feedstream analysis plan shall be prepared in accordance with 40 C.F.R. § 264.13 and the EPA Guidance Document "Waste Analysis At Facilities That Generate, Treat, Store, And Dispose of Hazardous Waste", OSWER 9938.4-03 (April 1994). The Respondents will implement the detailed feedstream analysis plan, as approved or modified by EPA, immediately upon receipt of EPA's approval.

12. The Respondents shall prepare a report for the time period beginning on the effective date of this CAFO and ending June 30, 2013, and every six (6) months thereafter. The report shall be submitted to EPA, with a copy to TCEQ, within thirty (30) days of the end of the reporting period. The report shall include the following:

a. For each waste stream accepted by the oil reclamation unit, identify the customer, original generator, waste stream description, RCRA waste codes, the SIC or NAICS code of the process generating the waste, a summary of any analyses conducted by the Respondents to verify the waste stream profiles, and the total volume of waste accepted during the reporting period. If requested by EPA, the Respondents shall provide copies of relevant waste approval documents and manifests for the specific waste streams.

b. All time periods in which there were exceedances of the operating parameters and the AWFCO requirements set forth in Appendix 1, Tables A and B, and exceedances of the hourly rolling averages for CO (Paragraph 69.A.9).

c. All exceedances of the Reconfigured TDU Compliance Standards and the AWFCO requirements established in accordance with Paragraph 69.C.9.

d. The initial Report shall include documentation showing that the tune-up and fuel specification analysis required by Paragraphs 69.A.5 and 69.A.6 have been conducted, and provide documentation showing the date of installation and subsequent operation of the AWFCO system required by Paragraphs 69.A.7.

e. Documentation showing the installation of the TOU required by Paragraph 69.A.8, and the additional AWFCO requirements required by Appendix 1, Table B (Paragraph 69.A.10).

The Report may be submitted in an electronic format (i.e., compact disk). The Respondents may claim the report as confidential business information (CBI), in accordance with the requirements of 40 C.F.R. Part 2. However, information that is emissions data or a standard or limitation cannot be claimed as CBI. 40 C.F.R. § 2.301(e). If the Report contains any information that is claimed CBI, the Respondents shall provide a redacted version with all CBI deleted.

B. RCRA Permit Modification

1. Within one year of the effective date of this CAFO, the Respondents shall submit to TCEQ, with a copy to EPA, an application for a Class 3 RCRA Permit Modification to permit the Reconfigured TDU as a miscellaneous unit under 40 C.F.R. Part 264, Subpart X in accordance with 30 T.A.C. § 335.152(a)(16) [40 C.F.R. Part 264, Subpart X], 30 T.A.C. Chapter 305 [40 C.F.R. §§ 270.10 – 270.14, 270.19, 270.23, and 270.30 – 270.33].

2. The permit application shall also include relevant requirements of 40 C.F.R. Part 264, Subparts I through O and AA through CC, 40 C.F.R. Part 270, and 40 C.F.R. Part 63, Subpart EEE that are appropriate for the operation of the Reconfigured TDU, including an engineering report, waste analysis, monitoring and inspection requirements, and closure requirements set forth in 30 T.A.C. § 335.152(a)(13) [40 C.F.R. §§ 264.341, 264.347, and 264.351].

3. The Respondents shall also request that the issued RCRA permit modification include the following:

a. The feedstock limitations applicable to the operation of the oil reclamation unit under 40 C.F.R. § 261.6(a)(3)(iv)(C) set forth in Paragraph 69.D;

b. The investigation, recordkeeping, testing, and reporting requirements of 40 C.F.R. § 63.1206(c)(3) (v), (vi) and (vii);

c. Appropriate recordkeeping and reporting requirements; and

d. Any applicable risk-based terms and conditions necessary to protect human health and the environment.

4. The failure to timely submit a Class 3 Permit Modification to TCEQ and EPA within the deadline set forth in Paragraph 69.B.1 shall result in the termination of the Respondents' authorization to operate the Reconfigured TDU on that date unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

5. By no later than three and one-half years (42 months) from the effective date of this CAFO, the Respondents must complete all permitting requirements and obtain issuance from the TCEQ of a final RCRA Subpart X permit for the TDU as a Subpart X – Miscellaneous Unit in accordance with 30 T.A.C. § 335.152(a)(16) [40 C.F.R. Part 264, Subpart X], 30 T.A.C. Chapter 305 [40 C.F.R. §§ 270.10 – 270.14, 270.19, 270.23, and 270.30 – 270.33], and which

incorporates the appropriate requirements of 40 C.F.R. Part 264, Subparts I through O and AA through CC, 40 C.F.R. Part 270, and 40 C.F.R Part 63, Subpart EEE. In the event that TCEQ does not issue a RCRA Subpart X permit for the Reconfigured TDU as described above by the above deadline, the Respondents' authorization to operate the Reconfigured TDU terminates on that date, unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

C. Compliance Demonstration Test

1. The Respondents shall perform a compliance demonstration test (CDT) in accordance with the approved CDT Plan, which is attached as Appendix C and incorporated by reference into the CAFO. The CDT requires the Respondents to demonstrate compliance with the emissions limits of 40 C.F.R. § 63.1219(b) set forth in Paragraph C.5, the destruction and removal efficiency standard of 40 C.F.R. § 63.1219(c)(1) set forth in Paragraph C.4, and establish limits for the operating parameters set forth in Paragraph 69.C.6 (Appendix 1, Table C).

2. Within sixty (60) days of the effective date of this CAFO, the Respondents shall submit to EPA for approval, with a copy to TCEQ, a Quality Assurance Project Plan (QAPP) for the CDT. The QAPP shall be prepared in accordance with the EPA Region 6 Guidance "Quick Reference Guide, Test Burn Program Planning for Hazardous Waste Combustion (HWC) Units" dated August 6, 2012. The Respondents shall implement the QAPP as approved or modified by EPA.

3. The Respondents shall implement the CDT in accordance with Appendix 3 within ninety (90) days after reconfiguration of the TDU pursuant to Paragraph 69.A.8 of this CAFO.

4. During the CDT, the Respondents must achieve a destruction and removal efficiency (DRE) of 99.99% for toluene, the designated principle organic hazardous constituent (POHC). The DRE shall be calculated in accordance with 40 C.F.R. § 63.1219(c)(1).

5. The emission limits that must be met during the CDT are set forth in 40 C.F.R. § 63.1219(b).

6. The operating parameters limits that will be established during the CDT are set forth in Appendix 1, Table C.

7. The Respondents must not exceed the emission limits set forth in 40 C.F.R. § 63.1219(b), and must achieve a DRE of 99.99% for toluene [as set forth in 40 C.F.R. § 63.1219(c)] for all three runs in order to have a successful CDT. If the Respondents determine, based on the results of analyses of stack samples, that they have exceeded any emission standard or failed to meet the DRE requirement during any of the three runs, they must immediately cease processing hazardous waste in the Reconfigured TDU. The Respondents must make this determination within forty-five (45) days following completion of the CDT. The Respondents may not resume operation of the Reconfigured TDU until the Respondents have submitted and received EPA approval of a revised CDT plan, at which time operations can resume to demonstrate compliance with the emission limits and DRE requirements during all of the three runs.

8. All analyses required by the CDT plan shall be performed by a NELAC accredited laboratory or by a laboratory pre-approved by TCEQ.

9. Within ninety (90) days from completion of the CDT, the Respondents shall submit a CDT Report to EPA and TCEQ prepared in accordance with requirements in the CDT Plan, documenting compliance with the DRE standard and emission limits set forth in Paragraphs 69.C.4 and 69.C.5, and identifying operating parameter limits and AWFCO settings for the parameters set forth in Appendix 1, Table C. The DRE standard, emission limits, operating parameter limits, and the AWFCO settings shall also be set forth in a separate Appendix entitled

"Reconfigured TDU Compliance Standards". All data collected during the CDT (including, but not limited to, field logs, chain-of-custody documentation, monitoring data, sampling and analytical results, and any other data or calculations supporting the emissions calculations or operating parameter limits) must be submitted to EPA and TCEQ as part of the CDT Report. However, information in the CDT Report that is emissions data or a standard or limitation cannot be claimed as CBI. 40 C.F.R. § 2.301(e). If the Report contains any information that is claimed CBI, the Respondents shall provide a redacted version with all CBI deleted.

10. As of the date of the submission of the CDT Report, the Respondent shall comply with all operating requirements set forth in the "Reconfigured TDU Compliance Standards", unless otherwise notified by EPA.

11. EPA will review the CDT Report. EPA will make a finding concerning compliance with the emissions standards, DRE requirements, and other requirements of the CDT. If EPA determines that the Respondents have met all the requirements, it shall issue a Finding of Compliance to the Respondents. If EPA determines that the Respondents did not meet all of the requirements, it shall issue a Finding of Non-Compliance. Subject to Paragraph 69.C.7 of this CAFO, the issuance of a Finding of Non-Compliance by EPA shall result in the termination of the Respondents' authorization to operate the Reconfigured TDU on that date.

12. The failure to timely submit a CDT Report to EPA and TCEQ within ninety (90) days from completion of the CDT shall result in the termination of the Respondents' authorization to operate the Reconfigured TDU on that date, unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

D. Compliance with 40 C.F.R. § 261.6(a)(3)(iv)(C)

1. Unless the TDU and the tanks identified in Paragraph 20 are authorized by the RCRA Permit Modification required by Section III.B of this CAFO (or any subsequent permit amendment) to receive wastes that do not meet the requirements set forth in 40 C.F.R. § 261.6(a)(3)(iv)(C), feedstock for the oil reclamation unit shall consist only of non-hazardous waste, and oil-bearing hazardous waste from petroleum refining, production, and transportation practices. Oil-bearing hazardous waste from petroleum refining, production, or transportation practices includes the following listed hazardous waste from specific Petroleum Refining Sources (K049, K050, K051, K052, K169, and K170). Also acceptable is oil-bearing hazardous waste from processes which meet the definition of the following Standard Industrial Classification (SIC) codes and corresponding North American Industry Classification System (NAICS) codes (i.e., petroleum refining, production, and transportation practices) as follows:

SIC Code	SIC Description	NAICS Code	NAICS Title
1311	Crude Petroleum & Natural Gas	211111	Crude Petroleum and Natural Gas Extraction
1321	Natural Gas Liquids	211112	Natural Gas Liquid Extraction
1381	Drilling Oil & Gas Wells	213111	Drilling Oil and Gas Wells
1382	Oil & Gas Field Exploration Services (except geophysical mapping & surveying)	213112	Support Activities for Oil & Gas Operations
1389	Oil and Gas Field Services, NEC (except construction of field gathering lines, site preparation and related construction activities performed on a contract or fee basis)	213112	Support Activities for Oil and Gas Operations
2911	Petroleum Refining	324110	Petroleum Refineries
4612	Crude Petroleum Pipelines	486110	Pipeline Transportation of Crude Oil
4613	Refined Petroleum Pipelines	486910	Pipeline Transportation of Refined Petroleum Products

4789	Transportation Services, NEC (pipeline terminals and stockyards for transportation)	488999	All Other Support Activities for Transportation
4922	Natural Gas Transmission	486210	Pipeline Transportation of Natural Gas
4923	Natural Gas Transmission and Distribution (distribution)	221210	Natural Gas Distribution
4923	Natural Gas Transmission and Distribution (transmission)	486210	Pipeline Transportation of Natural Gas
5171	Petroleum Bulk Stations and Terminals (except petroleum sold via retail method)	488999	All Other Support Activities for Transportation
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals (merchant wholesalers)	424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)

Nothing in this Section III.D shall be construed to preclude Respondents from seeking authorization from the TCEQ to process oil-bearing materials outside the scope of 40 C.F.R. § 261.6(a)(3)(iv)(C). However, the definition of oil-bearing hazardous waste from petroleum refining, production, or transportation practices set forth in this Paragraph shall remain the same.

2. Using feedstock from processes meeting the definition of the aforementioned SIC/NAICS Codes does not constitute compliance with 40 C.F.R. § 261.6(a)(3)(iv)(C) or this CAFO. The Respondents are required to make a separate determination whether the hazardous waste in question is "oil-bearing," and that the hazardous waste was originally generated from petroleum refining, production, or transportation practices. The Respondents shall request that this provision be placed in the issued RCRA permit as applicable to the oil reclamation unit operation under 40 C.F.R. § 261.6(a)(3)(iv)(C).

E. TCEQ Submission, Revision, and Approval Process

1. For the Class 3 RCRA Permit Modification required be submitted to TCEQ for approval under this CAFO, TCEQ will review the application in accordance with 30 T.A.C.

§§ 281.3(c), 281.18 and 281.19(a) and (b). The Respondents must respond to any Notice of Deficiency (NOD), with a copy to EPA, within the time period specified by the TCEQ. In the event that the Respondents fail to submit a timely and complete NOD response, the Respondents' authorization to operate the TDU shall terminate on the NOD response deadline unless that deadline has been extended pursuant to Section IV.F (Force Majeure).

F. Additional Conditions

1. To comply with this CAFO, the Respondents must obtain a RCRA permit for the TDU as a Subpart X – Miscellaneous Unit in accordance with 30 T.A.C. § 335.152(a)(16) [40 C.F.R. Part 264, Subpart X], 30 T.A.C. Chapter 305 [40 C.F.R. §§ 270.10 – 270.14, 270.19, 270.23, and 270.30 – 270.33], and which incorporates the appropriate requirements of 40 C.F.R. Part 264, Subparts I through O and AA through CC, and 40 C.F.R. Part 270, and 40 C.F.R Part 63, Subpart EEE.

2. The Respondents may seek relief under the provisions of Section IV.F of this CAFO (Force Majeure) for any delay in the performance of any such obligations resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if the Respondent has submitted a timely and complete application and has taken all other actions necessary to obtain such permit or approval.

G. EPA Review and Comment on RCRA Permit

1. Nothing in this CAFO shall limit EPA's rights under applicable environmental laws or regulations, including, but not limited to, Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), 40 C.F.R. § 270.32 and 40 C.F.R. § 271.19, to review, comment, and incorporate appropriate requirements of 40 C.F.R. Parts 264, Subparts I through O and Subparts AA through CC, and

40 C.F.R. Part 63, Subpart EEE directly into the permit or establish other permit conditions that are based on those parts; or take action under Section 3008(a)(3) of RCRA, 42 U.S.C. § 6928(a)(3), against the Respondents on the ground that the RCRA permit for the Reconfigured TDU does not comply with a condition that the EPA Region 6 Regional Administrator in commenting on the permit application or draft permit stated was necessary to implement approved State program requirements, whether or not that condition was included in the issued permit. If the Respondent disputes an action taken by EPA pursuant to 40 C.F.R. § 270.32 or 40 C.F.R. § 271.19, the Defendant may invoke Dispute Resolution in accordance with Section IV.E of this CAFO.

H. Submissions

In all instances in which this Compliance Order requires written submissions to EPA and TCEQ, each submission must be accompanied by the following certification:

> "I certify under penalty of law to the best of my knowledge and belief, that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

All submissions must be certified on behalf of the Respondent(s) by the signature of a person authorized to sign a permit application or a report under 40 C.F.R. § 270.11.

I. Monitoring, Recordkeeping, and Record Retention Requirements

1. Upon the effective date of this CAFO, all interim operating parameters (Appendix 1, Table A), shakedown operating parameters (Appendix 1, Table B), and final operating parameters limits (Appendix 1, Table C and Paragraph 69.C.6) subject to AWFCO limits shall be monitored by the facility's Continuous Process Monitoring System (CPMS), which records data once per minute in an electronic data log (DLG). In addition, the Respondents shall keep copies

of all documents relating to compliance with the operating parameters limits not monitored by the CPMS, and all other documents relating to compliance with Section III of this CAFO. All records, including electronic records, shall be kept for a period of one year after termination of the CAFO. These monitoring and recordkeeping requirements are in addition to any other monitoring and/or recordkeeping requirements required by federal, state, or local laws, regulations, or permits. This information shall be made available to EPA and TCEQ upon request.

2. In addition, the Respondents shall preserve, for a period of one year after termination of the CAFO, all records and documents in its possession or in the possession of its divisions, employees, agents, contractors, or successors which in any way relate to this CAFO regardless of any document retention policy to the contrary. This information shall be made available to EPA and TCEQ upon request.

J. EPA Approval of Submissions

EPA will review the plans set forth in Paragraphs 69.A.11 (if applicable) and 69.C.2, and notify the Respondents in writing of EPA's approval or disapproval of the plan or any part thereof. Within the time specified, the Respondents shall address the deficiencies and submit a revised plan. EPA will approve, disapprove, or modify the revised submittal. EPA approved plans shall be incorporated by reference into this CAFO.

IV. TERMS OF SETTLEMENT

A. CIVIL PENALTY

70. Pursuant to the authority granted in Section 3008 of RCRA, 42 U.S.C. § 6928, and upon consideration of the entire record herein, including the Findings of Fact and Conclusions of Law, which are hereby adopted and made a part hereof, and upon consideration of the

seriousness of the alleged violations, the Respondents' good faith efforts to comply with the applicable regulations, and the June 2003 RCRA Civil Penalty Policy, it is hereby **ORDERED** that the Respondent U.S. Ecology Texas, Inc. be assessed a civil penalty of **ONE HUNDRED SIXTY-FIVE THOUSAND, SIX HUNDRED FIFTY-SEVEN DOLLARS ($165,657)**, and the Respondent TD*X Associates L.P. be assessed a civil penalty of **SIX HUNDRED TWENTY-TWO THOUSAND, FOUR HUNDRED SIXTY-THREE DOLLARS ($622,463).** The Respondent USET shall pay the assessed civil penalty within thirty (30) days of the effective date of this CAFO. The Respondent TD*X Associates L.P. shall pay the assessed civil penalty in four (4) payments as follows:

Payment No. 1: $157,978.35 within thirty (30) days of the effective date of this CAFO.

Payment No. 2: $157,978.35 ($153,268.99 civil penalty plus interest of $4,709.36) within one year of the effective date of this CAFO.

Payment No. 3: $157,978.35 ($154,822.97 civil penalty plus interest of $3,155.38) within two years of the effective date of this CAFO.

Payment No. 4: $157,978.34 ($156,392.69 civil penalty plus interest of $1,585.65) within three years of the effective date of this CAFO.

71. The Respondents shall pay the assessed civil penalty by certified check, cashier's check, or wire transfer, made payable to "Treasurer, United States of America, EPA - Region 6". Payment shall be remitted in one of three (3) ways: regular U.S. Postal mail (including certified mail), overnight mail, or wire transfer. For regular U.S. Postal mail, U.S. Postal Service certified mail, or U.S. Postal Service express mail, the check(s) should be remitted to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, MO 63197-9000

For overnight mail (non-U.S. Postal Service, e.g. Fed Ex), the check(s) should be remitted to:

U.S. Bank
Government Lockbox 979077
US EPA Fines & Penalties
1005 Convention Plaza
SL-MO-C2-GL
St. Louis, MO 63101
Phone No. (314) 418-1028

For wire transfer, the payment should be remitted to:

Federal Reserve Bank of New York
ABA: 021030004
Account No. 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, NY 10045
Field Tag 4200 of the Fedwire message should read
"D 68010727 Environmental Protection Agency"

PLEASE NOTE: Docket numbers RCRA-06-2012-0936 (Respondent USET) and RCRA-06-2012-0937 (Respondent TD*X) shall be clearly typed on the respective checks to ensure proper credit. If payment is made by check, the check shall also be accompanied by a transmittal letter and shall reference the Respondent's name and address, the case name, and docket number of the CAFO. If payment is made by wire transfer, the wire transfer instructions shall reference the Respondent's name and address, the case name, and docket number of the CAFO. The Respondents shall also send a simultaneous notice of such payment, including a copy of the check and transmittal letter, or wire transfer instructions to the following:

Chief, Compliance Enforcement Section (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Lorena Vaughn
Regional Hearing Clerk (6RC-D)
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

The Respondents' adherence to this request will ensure proper credit is given when penalties are received in the Region.

72. The Respondents agree not to claim or attempt to claim a federal income tax deduction or credit covering all or any part of the civil penalty paid to the United States Treasurer.

73. Pursuant to 31 U.S.C. § 3717 and 40 C.F.R. § 13.11, unless otherwise prohibited by law, EPA will assess interest and late payment penalties on outstanding debts owed to the United States and a charge to cover the costs of processing and handling a delinquent claim. Interest on the civil penalty assessed in this CAFO will begin to accrue thirty (30) days after the effective date of the CAFO and will be recovered by EPA on any amount of the civil penalty that is not paid by the respective due date. Interest will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 40 C.F.R. § 13.11(a). Moreover, the costs of the Agency's administrative handling of overdue debts will be charged and assessed monthly throughout the period the debt is overdue. *See* 40 C.F.R. § 13.11(b).

74. EPA will also assess a $15.00 administrative handling charge for administrative costs on unpaid penalties for the first thirty (30) day period after the payment is due and an additional $15.00 for each subsequent thirty (30) day period that the penalty remains unpaid. In addition, a

penalty charge of up to six percent per year will be assessed monthly on any portion of the debt which remains delinquent more than ninety (90) days. *See* 40 C.F.R. § 13.11(c). Should a penalty charge on the debt be required, it shall accrue from the first day payment is delinquent. *See* 31 C.F.R. § 901.9(d). Other penalties for failure to make a payment may also apply.

B. PARTIES BOUND

75. The provisions of this CAFO shall apply to and be binding upon the parties to this action, their officers, directors, agents, employees, successors, and assigns. The undersigned representative of each party to this CAFO certifies that he or she is fully authorized by the party whom he or she represents to enter into the terms and conditions of this CAFO and to execute and to legally bind that party to it.

C. ADDITIONAL REQUIREMENTS

76. The Respondents shall undertake the following additional requirements:

A. The Respondents agree that the oil reclamation unit and the TDU are subject to the requirements of 40 C.F.R. Part 61, Subpart FF.

B. Within thirty (30) days of the effective date of the CAFO, the Respondents shall submit to EPA a certification that the following equipment in the oil reclamation unit and the TDU is not in "volatile hazardous air pollutant" (VHAP) service, as that term is defined by 40 C.F.R. § 61.241:

1. pumps;
2. compressors;
3. pressure relief devices;
4. sampling connection systems;
5. open-ended valves or lines;

6. valves;

7. connectors;

8. surge control vessels;

9. bottoms receivers; and

10. control devices and systems.

This certification shall be submitted in accordance with Paragraphs 76.H and 76.I.

C. Pursuant to 40 C.F.R. § 61.354(c), as of the effective date of this CAFO, the Respondents shall install, calibrate, maintain, and operate according to manufacturer's specifications, devices to continuously monitor the control devices operations required by 40 C.F.R. § 61.349.

D. Pursuant to 40 C.F.R. § 61.345(a), within 180 days of the effective date of the CAFO, the Respondents shall install, operate, and maintain covers on Bins 1, 2, 3, 4, and the Centrifuge solid bins that meet the requirements of 40 C.F.R. § 61.345(a)(1). The cover and openings shall be in a closed, sealed position at all times that waste is in the container except when it is necessary to use the opening for waste loading, removal, inspection or sampling, as required by 40 C.F.R. § 61.345(a)(1)(ii). The Respondents shall monitor the cover and all openings for no detectable emissions initially and thereafter at least once per year by the methods specified in 40 C.F.R. § 61.355(h).

E. The Respondents shall use a submerged fill pipe when transferring waste into the containers by pumping, as required by 40 C.F.R. § 61.345(a)(2).

F. Within ninety (90) days after the reconfiguration of the TDU pursuant to Paragraph 69.A.8 of this CAFO, the Respondents shall conduct performance tests for the TOU and the carbon adsorption system to demonstrate compliance with the requirements of 40 C.F.R.

§ 61.349. The performance tests shall be conducted in accordance with the requirements of 40 C.F.R. § 61.355. A copy of the performance test results shall be submitted to EPA within ninety (90) days of completion of the performance tests. The performance tests results shall be submitted in accordance with Paragraphs 76.H and 76.I.

G. Within 210 days of the effective date of the CAFO, the Respondents shall submit a written report to EPA showing compliance with Paragraphs 76.C, 76.D, and 76.E.

H. The certification and report identified in this Section must be accompanied by the following certification:

> "I certify under penalty of law to the best of my knowledge and belief, that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

All submissions must be certified on behalf of the Respondent(s) by the signature of a person authorized to sign a permit application or a report under 40 C.F.R. § 270.11.

I. The certification and report required under this Section shall be sent to the following:

Craig Lutz
Toxics Enforcement Section (6EN-AT)
Compliance Assurance and Enforcement Division
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

D. STIPULATED PENALTIES

77. In addition to any other remedies or sanctions available to EPA, the Respondent(s) shall pay stipulated penalties in the following amounts for each day during which each failure or refusal to comply continues:

a. Failure to Timely Submit Reports or Plans - Paragraphs 69.A.11, 69.A.12, and 69.C.2

Period of Noncompliance	Penalty Per Violation Per Day
1st through 15th day	$ 1,000
16th through 30th day	$ 1,500
31st day and beyond	$ 2,500

b. Failure to Comply with Certain Interim Operating Requirements – Paragraphs 69.A.5, 69.A.6, 69.A.7 (installation of AWFCO only), 69A.8, and 69.A.11

Period of Noncompliance	Penalty Per Violation Per Day
1st through 15th day	$ 1,500
16th through 30th day	$ 2,500
31st day and beyond	$ 5,000

c. Failure to Comply with any Other Provision of Section III of this CAFO

Period of Noncompliance	Penalty Per Violation Per Day
1st through 15th day	$ 500
16th through 30th day	$ 1,000
31st day and beyond	$ 1,500

d. Failure to Comply with Additional Requirements – Section IV.C

Period of Noncompliance	Penalty Per Violation Per Day
1st through 15th day	$ 1,500
16th through 30th day	$ 2,500
31st day and beyond	$ 5,000

Penalties shall accrue from the date of the noncompliance until the date the violation is corrected, as determined by EPA.

78. The Respondent(s) shall pay stipulated penalties not more than fifteen (15) days after receipt of written demand by EPA for such penalties. Method of payment shall be in accordance with the provisions of Paragraph 71 herein. Interest and late charges shall be paid as stated in Paragraphs 73 - 74 herein.

79. Nothing in this agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of the Respondent(s) violation of this CAFO or of the statutes and regulations upon which this agreement is based, or for the Respondent's violation of any applicable provision of law.

E. DISPUTE RESOLUTION

80. If the Respondents object to any decision or directive of EPA in regard to Section III or IV.C, the Respondents shall notify each other and the following persons in writing of its objections, and the basis for those objections, within thirty (30) calendar days of receipt of EPA's decision or directive:

Associate Director
Hazardous Waste Enforcement Branch (6EN-H)
Compliance Assurance and Enforcement Division
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Chief, RCRA Enforcement Branch (6RC-ER)
Office of Regional Counsel
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

81. The Associate Director of the Hazardous Waste Enforcement Branch or his/her designee (Associate Director), and the Respondents shall then have an additional thirty (30) calendar days from EPA's receipt of the Respondents' written objections to attempt to resolve the dispute. If an agreement is reached between the Associate Director and the Respondents, the agreement shall be reduced to writing and signed by the Associate Director and the Respondents and incorporated by reference into this CAFO.

82. If no agreement is reached between the Associate Director and the Respondents within that time period, the dispute shall be submitted to the Director of the Compliance

Assurance and Enforcement Division or his/her designee (Division Director). The Division Director and the Respondents shall then have a second 30-day period to resolve the dispute. If an agreement is reached between the Division Director and the Respondents, the resolution shall be reduced to writing and signed by the Division Director and the Respondents and incorporated by reference into this CAFO. If the Division Director and the Respondents are unable to reach agreement within this second 30-day period, the Division Director shall provide a written statement of EPA's decision to the Respondents, which shall be binding upon the Respondents and incorporated by reference into the CAFO.

83. If the Dispute Resolution process results in a modification of this CAFO, the modified CAFO must be approved by the Regional Judicial Officer and filed pursuant to Section IV.H (Modifications).

84. The invocation of dispute resolution procedures under this Section shall not extend, postpone, or affect in any way, any obligations of the Respondents under this CAFO, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute. If the Respondents do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IV.D.

F. FORCE MAJEURE

85. A "force majeure event" is any event beyond the control of the Respondents, their contractors, or any entity controlled by the Respondents that delays the performance of any obligation under this CAFO despite the Respondents' best efforts to fulfill the obligation. "Best efforts" includes anticipating any potential force majeure event and addressing the effects of any such event (a) as it is occurring and (b) after it has occurred, to prevent or minimize any resulting

delay to the greatest extent possible. "Force Majeure" does not include the Respondents' financial inability to perform any obligation under this CAFO, but does include any delays attributable to the TCEQ's permitting process and the conduct of the contested case hearing.

86. The Respondents shall provide notice orally or by electronic or facsimile transmission as soon as possible, but not later than 72 hours after the time the Respondents first knew of, or by the exercise of due diligence, reasonably should have known of, a claimed force majeure event. The Respondents shall also provide written notice, as provided in Section IV.G of this CAFO, within seven days of the time the Respondents first knew of, or by the exercise of due diligence, reasonably should have known of, the event. The notice shall state the anticipated duration of any delay; its cause(s); the Respondents' past and proposed actions to prevent or minimize any delay; a schedule for carrying out those actions; and the Respondents' rationale for attributing any delay to a force majeure event. Failure to give such notice shall preclude the Respondents from asserting any claim of force majeure.

87. The Respondent also shall provide notice orally or by electronic or facsimile transmission to the other Respondent not later than 24 hours after the time Respondent first knew of, or by the exercise of due diligence, reasonably should have known of, a claimed force majeure event, provided that the failure to give such notice shall not limit either Respondent's responsibilities under this CAFO.

88. If the Complainant agrees that a force majeure event has occurred, the Complainant may agree to extend the time for the Respondents to perform the affected requirements for the time necessary to complete those obligations. An extension of time to perform the obligations affected by a force majeure event shall not, by itself, extend the time to perform any other

obligation. Where the Complainant agrees to an extension of time, the appropriate modification shall be made pursuant to Section IV.H of this CAFO.

89. If the Complainant does not agree that a force majeure event has occurred, or does not agree to the extension of time sought by the Respondents, the Complainant's position shall be binding, unless the Respondents invokes Dispute Resolution under Section IV.D of this CAFO. In any such dispute, the Respondents bear the burden of proving, by a preponderance of the evidence, that each claimed force majeure event is a force majeure event; that the Respondents gave the notice required by the paragraph above, that the force majeure event caused any delay the Respondents' claimed was attributable to that event; and that the Respondents exercised their reasonable best efforts to prevent or minimize any delay caused by the event. If the Respondents carry this burden, the delay at issue shall be deemed not to be a violation of the affected obligation of this CAFO.

G. NOTIFICATION

90. Unless otherwise specified elsewhere in this CAFO, whenever notice is required to be given, whenever a report or other document is required to be forwarded by one party to another, or whenever a submission or demonstration is required to be made, it shall be directed to the individuals specified below at the addresses given (in addition to any action specified by law or regulation), unless these individuals or their successors give notice in writing to the other parties that another individual has been designated to receive the communication:

Complainant:

Chief, Compliance Enforcement Section (6EN-HE)
Hazardous Waste Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Respondent U.S. Ecology Texas, Inc.:

Mary Reagan
McGinnis, Lochridge & Kilgore, L.L.P.
600 Congress Avenue
Suite 2100
Austin, Texas 78701

Respondent TD*X Associates, L.P.:

J.D. Head
Fritz, Bryne, Head & Harrison, PLLC
98 San Jacinto Boulevard
Suite 2000
Austin, TX 78701

Texas Commission on Environmental Quality

Section Manager
Industrial and Hazardous Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087 MC 130
Austin, TX 78711

H. MODIFICATION

91. The terms, conditions, and compliance requirements of this CAFO may not be modified or amended except as otherwise specified in this CAFO, or upon the written agreement of the Complainant and Respondent(s), and approved by the Regional Judicial Officer, and such modification or amendment being filed with the Regional Hearing Clerk.

I. RETENTION OF ENFORCEMENT RIGHTS

92. EPA does not waive any rights or remedies available to EPA for any other violations by the Respondents of Federal or State laws, regulations, or permitting conditions.

93. Except as herein provided, nothing in this CAFO shall limit the power and authority of EPA or the United States to take, direct, or order all actions to protect public health, welfare, or the environment, or prevent, abate or minimize an actual or threatened release of hazardous

substances, pollutants, contaminants, hazardous substances on, at or from the Respondent USET's facility or Respondent TD*X's oil reclamation unit and related equipment. Furthermore, nothing in this CAFO shall be construed or to prevent or limit EPA's civil and criminal authorities, or that of other Federal, State, or local agencies or departments to obtain penalties or injunctive relief under other Federal, State, or local laws or regulations.

94. The Complainant reserves all legal and equitable remedies available to enforce the provisions of this CAFO. This CAFO shall not be construed to limit the rights of the EPA or United States to obtain penalties or injunctive relief under RCRA or under other federal or state laws, regulations, or permit conditions.

95. In any subsequent administrative or judicial proceeding initiated by the Complainant or the United States for injunctive relief, civil penalties, or other appropriate relief relating to this Facility or the oil reclamation unit, the Respondents shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the Complainant or the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to this CAFO.

96. This CAFO is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. The Respondents are responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits. The Respondents' compliance with this CAFO shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The Complainant does not warrant or aver in any manner that the Respondents' compliance with any aspect of this

CAFO will result in compliance with provisions of the RCRA or with any other provisions of federal, State, or local laws, regulations, or permits.

J. INDEMNIFICATION OF EPA

97. Neither EPA nor the United States Government shall be liable for any injuries or damages to person or property resulting from the acts or omissions of the Respondents, their officers, directors, employees, agents, receivers, trustees, successors, assigns, or contractors in carrying out the activities required by this CAFO, nor shall EPA or the United States Government be held out as a party to any contract entered into by the Respondents in carrying out the activities required by this CAFO.

K. COSTS

98. Each party shall bear its own costs and attorney's fees. Furthermore, each Respondent specifically waives its right to seek reimbursement of its costs and attorney's fees under 5 U.S.C. § 504 and 40 C.F.R. Part 17.

L. TERMINATION

99. At such time as the Respondents believe they have completed all of the requirements of this CAFO, they may request that EPA concur whether all of the requirements of this CAFO have been satisfied. Such request shall be in writing and shall provide the necessary documentation to establish whether there has been full compliance with the terms and conditions of this CAFO. EPA will respond to said request in writing within ninety (90) days of receipt of the request. This CAFO shall terminate when all actions required to be taken by this CAFO have been completed, and the Respondents have been notified by the EPA in writing that this CAFO has been satisfied and terminated.

M. EFFECTIVE DATE

100. This CAFO, and any subsequent modifications, become effective upon filing with the Regional Hearing Clerk.

THE UNDERSIGNED PARTIES CONSENT TO THE ENTRY OF THIS CONSENT AGREEMENT AND FINAL ORDER:

FOR THE RESPONDENT:

Date: 9/27/12

US Ecology Texas, Inc.

FOR THE RESPONDENT:

Date: September 26, 2012

Carl R. Palmer
TD*X Associates L.P.

FOR THE COMPLAINANT:

Date: 10·03·12

John Blevins
Director
Compliance Assurance and
Enforcement Division

FINAL ORDER

Pursuant to the Section 3008 of RCRA, 42 U.S.C. § 6928, and the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, 40 C.F.R. Part 22, the foregoing Consent Agreement is hereby ratified. This Final Order shall not in any case affect the right or EPA or the United States to pursue appropriate injunctive relief or other equitable relief for criminal sanctions for any violations of law. This Final Order shall resolve only those causes of action alleged herein. Nothing in this Final Order shall be construed to waive, extinguish or otherwise affect the Respondents' (or their officers, agents, servants, employees, successors, or assigns) obligation to comply with all applicable federal, state, and local statutes and regulations, including the regulations that were the subject of this action. The Respondents are ordered to comply with the Compliance Order and terms of settlement as set forth in the Consent Agreement. Pursuant to 40 C.F.R. § 22.31(b), this Final Order shall become effective upon filing with the Regional Hearing Clerk.

Date: 10/4/12

Patrick Rankin
Regional Judicial Officer

APPENDIX 1 – OPERATING PARAMETERS

TABLE A

TDU OIL RECLAMATION SYSTEM INTERIM REQUIREMENTS PRIOR TO TOU INSTALLATION

Tag No.	Equipment Operating Parameter	Operating Parameter Limit	Compliance Basis
TT-18/19	TDU Dryer, Minimum Combustion Chamber Temperature	Maintain Temperature > 1,400°F	AWFCO: CPMS[1], 60-sec time delay
PT-1	TDU Dryer, Maximum Internal Pressure	Maintain Pressure < 0.00" W.C.	AWFCO: CPMS, 6-min Rolling Average (RA)[2]
OE-1	Purge Vent Gas Stream Maximum O_2 Concentration	O_2 < 7%	AWFCO: CPMS, 60-sec time delay
FE-101	Maximum Purge Vent Rate	Purge Vent Rate < 180 scfm	AWFCO: CPMS, Hourly Rolling Average (HRA)[3]
M-100	Minimum Percent Excess Air, Operation of Purge Vent Injector Air Supply	Purge Vent Air Supply > 20% Excess Air	AWFCO: CPMS, Tuning of Combustion Airflow
TE-28	Maximum Condenser System Exhaust Temperature	Temperature < 120°F	AWFCO: CPMS, HRA
	HEPA Filter Installed and Pressure Change Monitored to Ensure Integrity of Filter	Installed and Δ Pressure Monitoring	Installation Check; Δ Pressure Monitored Once Per Shift
	Maximum TDU Feed Mercury Concentration	[Hg] < 50 ppm/Bin	Blending Protocols & Documentation[4]
	Maximum TDU Feed Organic Halide Concentration	[Total Organic Halides] < 1,500 ppm/Bin	Blending Protocols & Documentation

[1] Continuous Process Monitoring System – See Paragraph 69.I of CAFO.

[2] Previous six 1-minute readings are summed and divided by six.

[3] 40 C.F.R. §§ 63.1209(b)(5).

[4] See Paragraph 69.A.3 of the CAFO.

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TABLE B

TDU OIL RECLAMATION SYSTEM REQUIREMENTS AFTER TOU INSTALLATION PRE-COMPLIANCE DEMONSTRATION TEST OPERATIONS

Tag No.	Equipment Operating Parameter	Shakedown (Pre-Test) OPL	Compliance Basis
PT-1	TDU Dryer, Maximum Internal Pressure	Maintain Pressure < 0.00" W.C.	AWFCO: CPMS[5], 6-min RA[6]
M-05	TDU Dryer, Cylinder Rotation On	Motor Operating	AWFCO: CPMS, Instantaneous
M-18	Product Discharge System	Motor Operating	AWFCO: CPMS, Instantaneous
M-21	Recirculation Blower Operating	Motor Operating	AWFCO: CPMS, Instantaneous
TT-121	TOU, Minimum Combustion Chamber Temperature	Maintain Temperature > 1,400°F	AWFCO: CPMS, HRA[7]
KY-110	TOU, Minimum Residence Time (Calculated from Purge Vent Flow Rate, Exhaust T, and Air Ratio)	Residence Time > 0.5 seconds	AWFCO: CPMS, HRA
AE-5/ OE-5	TOU Exhaust Gas, Maximum CO Concentration	[CO] < 100 ppmV @ 7% O_2	AWFCO: CEMS for CO, HRA
OE-1	Purge Vent Gas Stream, Maximum O_2 Concentration	[O_2] < 7%	AWFCO: CPMS, Instantaneous
FE-101	Maximum Purge Vent Rate	Vent Flow < 250 scfm	AWFCO: CPMS, HRA
FCV-102	Valve Position to Ensure Purge Vent is not Directed Away from TOU	Valve Closed	AWFCO: CPMS, 60-sec delay
M-121	Minimum Percent Excess Air , Operation of Purge Vent Injector Air Supply	Purge Vent Air Supply > 20% Excess Air	AWFCO: CPMS, Tuning of Combustion Airflow
TE-28	Maximum Condenser System Exhaust Temperature	Maintain Temperature < 120°F	AWFCO: CPMS, HRA

[5] Continuous Process Monitoring System – See Paragraph 69.I of the CAFO.

[6] Previous six 1-minute readings are summed and divided by six.

[7] 40 C.F.R. §§ 63.1209(a)(6) and 63.1209(b)(5).

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	HEPA Filter Installed and Pressure Change Monitored to Ensure Integrity of Filter	Installed and Δ Pressure Monitoring	Installation Check; Δ Pressure Monitored Once Per Shift
	Maximum TDU Feed Mercury Concentration	[Hg] < 50 ppm/Bin	Blending Protocols & Documentation[8], Feed Stream Analysis Plan (if applicable)[9]
	Maximum TDU Feed Organic Halide Concentration	[Total Organic Halides] < 1,500 ppm/Bin	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Semi-Volatile Metals Concentration[10]	N/A	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Low-Volatile Metals Concentration[11]	N/A	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)

[8] See Paragraph 69.A.3 of the CAFO.

[9] See Paragraph 69.A.11 of the CAFO.

[10] Semi-volatile metals means a combination of cadmium and lead.

[11] Low-volatile metals means a combination of Arsenic, Beryllium, and Chromium.

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TABLE C

TDU OIL RECLAMATION REQUIREMENTS AFTER TOU INSTALLATION POST-COMPLIANCE DEMONSTRATION TEST OPERATIONS

Tag No.	Equipment Operating Parameter	Interim/Final (Post-Test) OPL	Compliance Basis
PT-1	TDU Dryer, Maximum Internal Pressure	Maintain Pressure < 0.00" W.C.	AWFCO: CPMS[12], 6-min RA[13]
M-05	TDU Dryer, Cylinder Rotation On	Motor Operating	AWFCO: CPMS, Instantaneous
M-18	Product Discharge System	Motor Operating	AWFCO: CPMS, Instantaneous
M-21	Recirculation Blower Operating	Motor Operating	AWFCO: CPMS, Instantaneous
TT-121	TOU, Minimum Combustion Chamber Temperature	OPL Established @ > 3-Run Average from CDT	AWFCO: CPMS, HRA[14]
KY-110	TOU, Minimum Residence Time (Calculated from Purge Vent Flow Rate, Exhaust T, and Air Ratio)	Residence Time > 0.5 seconds	AWFCO: CPMS, HRA
AE-5/ OE-5	TOU Exhaust Gas, Maximum CO Concentration	Semi-Annual Testing until Waste Analysis Plan Approved, then Annual Testing	Performance Testing in lieu of CEMS; Waste Analysis Plan based with other OPLs
OE-1	Purge Vent Gas Stream, Maximum O_2 Concentration	$[O_2] < 7\%$	AWFCO: CPMS, Instantaneous
FE-101	Maximum Purge Vent Rate	Vent Flow < 250 scfm	AWFCO: CPMS, HRA
FCV-102	Valve Position to Ensure Purge Vent is not Directed Away from TOU	Valve Closed	AWFCO: CPMS, 60-sec time delay
M-121	Minimum Percent Excess Air, Operation of Purge Vent Injector Air Supply	Purge Vent Air Supply > 20% Excess Air	AWFCO: CPMS, Tuning of Combustion Airflow

[12] Continuous Process Monitoring System – See Paragraph 69.I of CAFO.

[13] Previous six 1-minute readings are summed and divided by six.

[14] 40 C.F.R. §§ 63.1209(a)(6) and 63.1209(b)(5).

TE-28	Maximum Condenser System Exhaust Temperature	OPL Established @ < 3-run Average Based on CDT	AWFCO: CPMS, HRA
	HEPA Filter Installed and Pressure Change Monitored to Ensure Integrity of Filter	Installed and Δ Pressure Monitoring	Installation Check; Δ Pressure Monitored Once Per Shift
	Maximum TDU Feed Mercury Concentration	[Hg] < 50 ppm/Bin	Blending Protocols & Documentation[15], Feed Stream Analysis Plan (if applicable)[16]
	Maximum TDU Feed Organic Halide Concentration	OPL Established as Measured Ratio[17]	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Semi-Volatile Metals Concentration[18]	OPL Established as Measured Ratio[19]	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)
	Maximum TDU Feed Low-Volatile Metals Concentration[20]	OPL Established as Measured Ratio[21]	Blending Protocols & Documentation, Feed Stream Analysis Plan (if applicable)

[15] See Paragraph 69.A.3 of the CAFO.

[16] See Paragraph 69.A.11 of the CAFO.

[17] Maximum TDU Feed Concentration established as a measured ratio (not to exceed 4000 ppm/bin) from emissions data collected during CDT. See plan example calculations.

[18] Semi-volatile metals means a combination of cadmium and lead.

[19] Maximum TDU Feed Concentration established as measured ration from emissions data collected during CDT. See plan example calculations.

[20] Low-volatile metals means a combination of Arsenic, Beryllium, and Chromium.

[21] Maximum TDU Feed Concentration established as measured ratio from emissions data collected during CDT. See plan example calculations.

EPA-HQ-2019-001821_00000025

CERTIFICATE OF SERVICE

I hereby certify that on the 4th day of October, 2012, the original and one copy of the foregoing Consent Agreement and Final Order (CAFO) was hand delivered to the Regional Hearing Clerk, U.S. EPA - Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733, and that true and correct copies of the CAFO were sent to the following by the method indicated below:

For US Ecology Texas, Inc.

Certified Mail – Return Receipt Requested – 7007 0710 0002 1385 1491

Mary Reagan
McGinnis, Lochridge & Kilgore, L.L.P.
600 Congress Avenue, Suite 2100
Austin, Texas 78701

For TD*X Associates LP

Certified Mail – Return Receipt Requested – 7007 0710 0002 1385 1507

J.D. Head
Fritz, Bryne, Head & Harrison, PLLC
98 San Jacinto Boulevard
Suite 2000
Austin, TX 78701

Evan L Pearson

Appendix B
to
Addendum to the Technical Support Document (ATSD)

Tradebe Treatment and Recycling, LLC

Significant Source Modification No. 089-34432-00345
Significant Permit Modification No. 089-34503-00345

IDEM letter to Pollution Control Industries
(1 page)

Copy sent to File 1A

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

July 18, 2002

Ms. Tita LaGrimas
Director of Regulatory Affairs
Pollution Control Industries
4343 Kennedy Avenue,
East Chicago, IN 46312

Dear Ms. LaGrimas:

Re: Indirect Thermal Desorbtion Unit

This is in response to your letter of June 11, 2002 regarding the regulatory status of an indirect thermal desorbtion unit you are proposing to utilize to reclaim hydrocarbons from non-liquid hazardous waste. These hydrocarbons will then be sold for utilization in the manufacture of lubricants. As we understand it, you are seeking concurrence that the unit is exempt from the need for a permit under the hazardous waste rules pursuant to the recycling process exclusion at 40 CFR 261.6 (c) (1).

Provided that the unit is used only for the reclamation of components of hazardous waste that will be legitimately utilized either directly or as ingredients in manufacturing other products you are correct in your understanding that the unit would not require a hazardous waste permit. Other uses to which this unit could be utilized; for example, to meet treatment standards for subsequent disposal, or for production of hazardous waste fuels would negate this exclusion.

If you have any questions please contact me at 317-308-3341.

Sincerely,

Dave Berrey

Dave Berrey
Senior Environmental Manager I
Technical Compliance Section
Office of Land Quality

Appendix C
to
Addendum to the Technical Support Document (ATSD)

Tradebe Treatment and Recycling, LLC

Significant Source Modification No. 089-34432-00345
Significant Permit Modification No. 089-34503-00345

IDEM letter to David Case of the Environmental Technology Council (ETC)
(3 pages)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

March 31, 2006

Mr. David R. Case
Executive Director
Environmental Technology Council
734 15th Street, N.W. Suite 750
Washington, DC 20005

Dear Mr. Case:

Re: Hazardous Waste Recycling

This is in response to your letter of March 13, 2006 regarding the recycling activities of Pollution Control Industries (PCI), specifically in relation to the unit described as the Solids Distillation System (SDS). I appreciate the opportunity to respond to your concerns. You are correct in your understanding that PCI claims a recycling exemption from hazardous waste permitting requirements for the SDS.

The stated purpose of your letter is to inquire whether PCI has demonstrated to the Indiana Department of Environmental Management (IDEM) or the United States Environmental Protection Agency (EPA), Region 5, that the SDS meets the sham recycling criteria established by the EPA. This type of demonstration is commonly known as a legitimate recycling determination. The issue is whether the activity is considered recycling or some form of treatment being called recycling in order to evade environmental regulation.

From a regulatory perspective, this agency considers the SDS unit to be no different than any other reclamation unit. The unit is designed to process solids for the purpose of recovering the petroleum hydrocarbon component. The recovered petroleum hydrocarbon is currently sold as a degreasing agent.

Two waste streams are generated in this process, a still bottom and a carbon char. Presently these waste streams are being managed and disposed of as listed hazardous waste. PCI is investigating possible uses of the carbon char in a manner that it would qualify for the reuse exclusions found at 40 CFR 261.2(e). When, and if, they find a use that they consider legitimate, IDEM will review their proposal for regulatory legitimacy, as is the usual practice.

As you indicated in your letter, the legitimate recycling criteria guidance has been available since 1985. This guidance was reorganized and rewritten for clarity and was proposed as a rule on October 28, 2003. This rule has never been finalized.

You make the statement that PCI is required to demonstrate to the regulatory agencies that the SDS meets the sham recycling criteria in order to qualify for the recycling exclusion. In the preamble to the proposed rulemaking EPA stated that "if the criteria were finalized as rule, it would continue to be used in the same way as current guidance is used. That is, we would expect the regulated community to continue to evaluate their recycling operations and reach their own conclusions. Such conclusions would of course be subject to review by EPA or the authorized state." (68 FR 61583)

IDEM has used the existing guidance in the spirit intended for this guidance since 1985. This spirit is expressed by EPA in the 2003 proposed rule preamble as follows: "a legitimacy determination involves evaluating site-specific information to determine whether or not a secondary material being recycled, is in effect being used as a commodity rather than a waste." The memorandum also explained that "each recycling scenario is likely to require case-specific evaluation." The memorandum further explained that "depending on case-specific facts and circumstances, certain criteria may weigh more heavily than others in making legitimacy determinations."

EPA also stated that "not all legitimate recycling will conform to each of the four criteria, and that some subjective evaluation and balancing will be required. Where more specific regulatory criteria or requirements have been established in regulations, affected parties should look to those regulatory provisions in addition to the generic criteria proposed in today's rule." (68 FR 61582) The State of Indiana has adopted more specific criteria for recycling scenarios involving use of secondary materials as manufacturing ingredients (329 IAC 3.1-6-5). Indiana regulation does not have legitimacy criteria in the rules for reclaim and reuse scenarios.

PCI met with IDEM hazardous waste program staff prior to the construction of the SDS unit. IDEM stressed that the unit could only be used to recover materials that were legitimately reused either as a manufacturing ingredient or directly as a product. If the unit was used to produce fuels or merely for treatment, the unit would require a hazardous waste treatment permit.

PCI is aware that the unit must be used to process only materials that contain recoverable quantities of petroleum hydrocarbon. IDEM compliance inspectors monitor incoming materials as a routine part of PCI's regular inspections. EPA Region 5 staff has also evaluated the SDS unit during joint inspections with IDEM. To this date we have not observed any activities indicative of sham recycling.

Your letter poses a number of very specific questions. The language of the letter implies that the answers are simple and straightforward. Unfortunately, this is not the case. From the time that the legitimate recycling guidance first made its debut in 1985, the criteria have been intensely debated. Even if the general idea of the criteria is accepted there is little consensus among government regulators on the application of the criteria. The criteria are by their nature subjective and will remain so even if they are finalized as rule. In their current form as guidance it is even more problematic to enforce these concepts in the fashion reflected in your letter.

I appreciate your questions and will further consider them as IDEM continues to monitor PCI's recycling activities. Should IDEM suspect a sham application, staff will use their best judgment under relevant laws, rules, and guidance. Regarding your question on the use of the carbon char as a replacement for coke, I have no information that would lead me to believe this is being contemplated. PCI recently informally indicated they were looking at an entirely different use for the char in the steel industry. If they pursue the reuse they are considering, IDEM will evaluate their proposal.

You have asked IDEM to confirm that all "materials" received by PCI for processing in the SDS are manifested and stored as hazardous waste under RCRA. This request is not consistent with regulatory requirements. The hazardous waste rules contain exemptions for certain types of materials being reclaimed. For example, characteristic sludges, characteristic by-products and commercial chemical products that are reclaimed are not solid waste, therefore can not be regulated as hazardous waste (40 CFR 261.2). PCI may also receive conditionally-exempt small quantity generator hazardous waste, household hazardous waste, and non-hazardous solid waste without a manifest. IDEM has not observed any regulated hazardous waste arriving at the facility without a manifest. For those wastes not regulated as hazardous waste, inspectors still look for compliance with solid waste rules, segregation of incompatibles, permit conditions and other applicable requirements.

If you have any questions or would like to discuss further, please contact Dave Berrey in our Office of Land Quality at 317-308-3341 or toll free at 800-451-6027. Mr. Berrey serves as IDEM's primary contact on issues related to the legitimate recycling of hazardous waste. For issues related to hazardous waste permitting, please contact Thomas Linson in our Office of Land Quality at 317-232-3292 or tlinson@idem.IN.gov.

Sincerely,

Thomas W. Easterly
Commissioner

cc: Stephen Johnson, Administrator, U.S. EPA
Thomas Skinner, Administrator, U.S. EPA Region 5
Margaret Guerriero, Director, Waste, Pesticides and Toxics Division
Matt Hale, Director, Office of Solid Waste

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:	Tradebe Treatment and Recycling, LLC
Source Location:	4343 Kennedy Avenue, East Chicago, IN 46312
County:	Lake
SIC Code:	4953 (Refuse Systems)
Operation Permit No.:	T 089-29424-00345
Operation Permit Issuance Date:	February 25, 2011
Significant Source Modification No.:	089-34432-00345
Significant Permit Modification No.:	089-34503-00345
Permit Reviewer:	Heath Hartley

Existing Approvals

The source was issued Part 70 Operating Permit No. T 089-29424-00345 on February 25, 2011. The source has since received the following approvals:

(a) Administrative Amendment No. 089-32233-00345, issued on August 29, 2012.
(b) Administrative Amendment No. 089-33257-00345, issued on June 20, 2013.
(c) Minor Source Modification No. 089-34241-00345, issued on June 13, 2014.
(d) Minor Permit Modification No. 089-34282-00345, issued on August 7, 2014.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	40 CFR 81.315 as amended by 77 FR 34228.[1,2]
$PM_{2.5}$	Attainment effective February 6, 2012, for the annual PM2.5 standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM2.5 standard.
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard which was revoked effective June 15, 2005.
[2]The department has filed a legal challenge to U.S. EPA's designation in 77 FR 34228.

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Lake as nonattainment for ozone. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x

emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NO_x emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) $PM_{2.5}$
Lake County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status

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	80.4
PM_{10}	79.2
$PM_{2.5}$	79.2
SO_2	negl.
NO_X	6.5
VOC	66.8
CO	5.5
Total HAPs	68.9

*This table is based on PTE After Issuance table in Minor Permit Modification 089-34282-00345.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant, excluding GHGs, is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

(c) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are 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).

(d) These emissions are based upon Part 70 Operating Permit No. T 089-29424-00345, Administrative Amendment No. 089-32233-00345, Administrative Amendment No. 089-33257-00345 and Minor Permit Modification No. 089-34282-00345.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Tradebe Treatment and Recycling, LLC on April 15, 2014, relating to the installation of a new Solids Distillation System (SDS II). The SDS process is a method of extracting organics from organic solid hazardous waste and

collecting the organics as fuels or reusable products. The following is a list of the proposed emission units and pollution control devices:

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

In addition, Tradebe is proposing to increase the capacity of the existing Pot Still from 70 gallons per hour to 115 gallons per hour as follows with deleted language as ~~strikethroughs~~ and new language in **bold**:

(i) One (1) Pot Still, constructed in 2007 **and modified in 2015**, with a maximum throughput rate of ~~70~~**115** gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Enforcement Issues

IDEM is aware of the following:

- Although the existing unit SDS VRU was permitted in 2004, the PTE calculations were not included and calculated appropriately.
- In addition, several federal rules that are applicable to the existing facilities at this source were not previously identified as applicable federal rules and are now being incorporated into the permit
- The existing Unit 2 previously listed a capacity of 7,200 gallons per hour. A review of this unit shows that the capacity of the receiving and shipping operation is higher.

IDEM is reviewing these matters and will take the appropriate action.

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.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	331.5
PM_{10}	331.7
$PM_{2.5}$	331.5
SO_2	17.2
NO_X	25.3
VOC	4,692
CO	1,688
Hexane	1,809
Total HAPs	1,831

Note: These values reflect the emissions of the new units only. There have been PTE corrections to existing units that are not shown here.

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

This source modification is subject to 326 IAC 2-7-10.5(g)(4) and (g)(6) (significant source modification) because it has the potential to emit PM, PM10 and VOC greater than 25 tons per year and because it has the potential to emit a combination of HAPs of greater than 25 tons per year. 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.

Permit Level Determination – PSD or Emission Offset

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/permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit of the Entire Source After Issuance of Modification (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP**	Total HAPs
HWF Storage	0	0	0	0	0	8.9	0	8.9	8.9
~~HWF Ship~~**Unit 2R++**	0	0	0	0	0	~~59.3~~ **< 21.3**	0	23.1	~~59.3~~ **23.1**
Unit 2S++	0	0	0	0	0	**< 21.3**	0	23.1	**23.1**
Unit 24	0	0	0	0	0	2.2	0	2.2	2.2
Lab Pack	0.6	0.6	0.6	0	0	2.5	0	2.5	2.5
Degassing**	0	0	0	0	0	~~4.0~~ **17.0**	0	0.3	~~0.06~~ **0.3**
SDS Shredder	0	0	0	0	0	0.1***	0	2.6	2.6
SDS Shaker and conveyor**	77.7	77.7	77.7	0	0	0.7***	0	0	0
~~SDS-ATDU~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~		~~0~~	~~0~~	~~14.8~~
SDS-ATDU from NG Combustion+	0.1	~~0.3~~ **0.5**	~~0.3~~ **0.5**	~~0.03~~ **0.04**	~~4.4~~ **6.8**		~~3.7~~ **5.7**	0.1	0.1
VRU**	**0**	**0**	**0**	**0**	**0**	**< 23.4**	**8.6**	**904.3**	**904.3**
Flare FL1 (from VRU)**	**0**	**0**	**0**	**8.1**	**5.2**		**28.5**	**12.6 HCl**	**13.4**
Distillation	0	0	0	0	0	0.06***	0	2.3	2.3
Tank 52-55	0	0	0	0	0	0.5	0	0.5	0.5
Tank 57-67	0	0	0	0	0	1.9	0	1.9	1.9
Pot Still	0	0	0	0	0	~~0.5~~**4.2**	0	0.5	0.5
Thin Film Evap	0.02	0.1	0.1	0.01	1.1	0.1	0.9	0.02	0.02
Heater	0.02	0.1	0.1	0.01	1.1	0.1	0.9	0.02	0.02
Fugitive	1.9	0.4	0.4	0	0	0	0	0	0
2015 Modification									
SDS Shredder II	**0**	**0**	**0**	**0**	**0**	**< 95.6**	**0**	**0**	**7.1**
SDS ATDU II	**0.3**	**1.0**	**1.0**	**0.1**	**13.7**		**11.5**	**0.2**	**0.3**
SDS VRU II	**0**	**0**	**0**	**0**	**0**		**17.6**	**1808.6 Hexane**	**1808.6**
Flare FL1 (from VRU II)	**0**	**0**	**0**	**16.2**	**10.5**		**57.0**	**13.1 HCl**	**14.0**
SHS	**82.8**	**82.8**	**82.8**	**0**	**0**		**0**	**0**	**0**
Tanks 81-87	**0**	**0**	**0**	**0**	**0**		**0**	**1.3**	**1.3**
F-01 and F-02	**0**	**0**	**0**	**0**	**0**		**0**	**0.1**	**0.1**
Cooling Tower	**0.7**	**0**	**0**	**0**	**0**		**0**	**0**	**0**
Emergency Generator	**0.2**	**0.1**	**0.1**	**0.9**	**5.4**	**0.2**	**1.2**	**negl.**	**negl.**
Subtotal for 2015 Modification	**83.9**	**84.1**	**83.9**	**17.2**	**29.6**	**< 100**	**87.4**	**1808.9**	**1831.4**
Total PTE of Entire Source	~~80.4~~ **164.3**	~~79.2~~ **163.5**	~~79.2~~ **163.3**	~~0.05~~ **25.3**	~~6.5~~ **43.8**	~~66.8~~ **< 199.9**	~~5.5~~ **132.0**	**2713.3 Hexane**	~~68.9~~ **2817.1**
PSD Major Source Thresholds	250	250	250	250	NA	NA	250	--	25
Emission Offset Major Source Thresholds	NA	NA	NA	NA	100	100	NA	NA	NA

*$PM_{2.5}$ listed is direct $PM_{2.5}$.
**Existing units previously limited under the limit for the SDS; calculations were corrected and/or emissions are now included.
***This unit is limited by 326 IAC 2-3 (Emission Offset).
+Calculations are only for natural gas combustion only. Calculations for the natural gas heater were corrected.
++HWF Ship has been separated into Receiving (Unit 2R) and Shipping (Unit 2S)

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

	Potential to Emit of the Entire Source After Issuance of Modification (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP**	Total HAPs
HWF Storage	0	0	0	0	0	8.9	0	8.9	8.9
Unit 2R++	0	0	0	0	0	< 21.3	0	23.1	23.1
Unit 2S++	0	0	0	0	0	< 21.3	0	23.1	23.1
Unit 24	0	0	0	0	0	2.2	0	2.2	2.2
Lab Pack	0.6	0.6	0.6	0	0	2.5	0	2.5	2.5
Degassing**	0	0	0	0	0	17.0	0	0.3	0.3
SDS Shredder	0	0	0	0	0	0.1***	0	2.6	2.6
SDS Shaker and conveyor**	77.7	77.7	77.7	0	0	0.7***	0	0	0
+SDS-ATDU from NG Combustion	0.1	0.5	0.5	0.04	6.8		5.7	0.1	0.1
VRU**	0	0	0	0	0	< 23.4	8.6	904.3	904.3
Flare FL1 (from VRU)**	0	0	0	8.1	5.2		28.5	12.6 HCl	13.4
Distillation	0	0	0	0	0	0.06***	0	2.3	2.3
Tank 52-55	0	0	0	0	0	0.5	0	0	0.5
Tank 57-67	0	0	0	0	0	1.9	0	1.9	1.9
Pot Still	0	0	0	0	0	4.2	0	0.5	0.5
Thin Film Evap	0.02	0.1	0.1	0.01	1.1	0.1	0.9	0.02	0.02
Heater	0.02	0.1	0.1	0.01	1.1	0.1	0.9	0.02	0.02
Fugitive	1.9	0.4	0.4	0	0	0	0	0	0
2015 Modification									
SDS Shredder II	0	0	0	0	0	< 95.6	0	0	7.1
SDS ATDU II	0.3	1.0	1.0	0.1	13.7		11.5	0.2	0.3
SDS VRU II	0	0	0	0	0		17.6	1808.6 Hexane	1808.6
Flare FL1 (from VRU II)	0	0	0	16.2	10.5		57.0	13.1 HCl	14.0
SHS	82.8	82.8	82.8	0	0		0	0	0
Tanks 81-87	0	0	0	0	0		0	1.3	1.3
F-01 and F-02	0	0	0	0	0		0	0.1	0.1
Cooling Tower	0.7	0	0	0	0		0	0	0
Emergency Generator	0.2	0.1	0.1	0.9	5.4	0.2	1.2	negl.	negl.
Subtotal for 2015 Modification	83.9	84.1	83.9	17.2	29.6	< 100	87.4	1808.9	1831.4
Total PTE of Entire Source	**164.3**	**163.5**	**163.3**	**25.3**	**43.8**	**< 199.9**	**132.0**	**2713.3 Hexane**	**2817.1**
PSD Major Source Thresholds	250	250	250	250	NA	NA	250	--	25
Emission Offset Major Source Thresholds	NA	NA	NA	NA	100	100	NA	NA	NA

*$PM_{2.5}$ listed is direct $PM_{2.5}$.
**Existing units previously limited under the limit for the SDS; calculations were corrected and/or emissions are now included.
***This unit is limited by 326 IAC 2-3 (Emission Offset).
+Calculations are only for natural gas combustion only. Calculations for the natural gas heater were corrected.
++HWF Ship has been separated into Receiving (Unit 2R) and Shipping (Unit 2S)

(a) This modification to an existing minor PSD stationary source is not major because the emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD major source thresholds.

(b) Emission Offset status:
This modification to an existing minor Emission Offset stationary source is not major because the emissions increase of VOC and NOx are less than the Emission Offset major source thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for the 2015 modification, the Permittee shall comply with the following:

(1) VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, along with emissions from the pot still and emergency generator, will limit the potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for this 2015 modification.

Note: After this modification, the PTE of VOC for the entire source will be greater than 100 tons per year. Therefore, the source is considered a Major Source under 326 IAC 2-3 Emission Offset.

(c) PSD status:
This modification to an existing minor PSD stationary source is not major because the emissions increase of PM, PM10, PM2.5, CO are less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

(1) PM emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(2) PM_{10} emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(3) $PM_{2.5}$ emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(4) CO emissions (after control) from the SDS VRU II shall not exceed 7.4 pounds per hour of SDS vapor product processed.

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

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

(a) The requirements of the New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, which is incorporated by reference as 326 IAC 12, are not included in the permit, because the ATDU II burners are not steam generating units.

(b) The requirements of the New Source Performance Standard for Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60.110b, Subpart Kb), which is incorporated by reference as 326 IAC 12, are not included in this permit for Tanks 81 through 87, F-01 and F-02. Tanks 81 through 84 and F-02 each have capacity less than 75 cubic meters (19812.9 gallons). Tanks 85-87 and F-01 have capacity greater than 75 cubic meters (19812.9 gallons); however they store material with an actual vapor pressure less than 15.0 kPa.

(c) The requirements of the New Source Performance Standard for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes (40 CFR 60, Subpart III) which is incorporated by reference as 326 IAC 12, are not included in the permit because the source does not include an air oxidation reactor.

(d) The requirements of the New Source Performance Standard for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations (40 CFR 60, Subpart NNN), which is incorporated by reference as 326 IAC 12, are not included for SDS II because the SDS II does not include a Distillation unit as defined by 40 CFR 60.661. The Solids Distillation System Units are not "distillation units" as this term is defined under New Source Performance Standards. Distillation unit and distillation process are defined under Subpart NNN as:

- o Distillation unit means a device or vessel in which distillation operations occur, including all associated internals (such as trays or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated recovery system.
- o Distillation operation means an operation separating one or more feed stream(s) into two or more exit stream(s), each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor-phase as they approach equilibrium within the distillation unit.

The Solids Distillation System (SDS) does not involve separation between the liquid and vapor-phase within the unit. In the SDS unit, organic material and water are separated from solid material by vaporization of such materials to separate them from solids. The vaporized material is then condensed into liquid form.

The applicability of this rule has been re-evalutated for some of the existing units, even though there are no physical changes to these units. The existing Distillation Unit is subject to the requirements of the New Source Performance Standard for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations (40 CFR 60, Subpart NNN), which is incorporated by reference as 326 IAC 12, because it does produce chemicals listed in 40 CFR 60.667 and was constructed after December 30, 1983. Note: For clarity, these are not pure chemicals but instead mixtures that vary in composition depending upon the composition of feed stocks. This is a Title I change.

The Distillation Unit is subject to the following requirements of 40 CFR 60, Subpart NNN:

(1) 40 CFR 60.660
(2) 40 CFR 60.661
(3) 40 CFR 60.662(a)
(4) 40 CFR 60.663(f)
(5) 40 CFR 60.664
(6) 40 CFR 60.665
(7) 40 CFR 60.667
(8) 40 CFR 60.668

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, except as otherwise specified in 40 CFR Part 60, Subpart NNN.

(e) The requirements of the New Source Performance Standard for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006 (40 CFR 60, Subpart VV), which is incorporated by reference as 326 IAC 12, are not included in the permit for the SDS II since its operations do not involve chemical synthesis, as that term is commonly defined (there is no corresponding definition within the rule), as its operations involve physical separation of materials to remove undesirable materials (solids, water), but do not involve reactions that create chemical compounds from other chemical compounds. Also, it does not produce any of the chemicals listed in §60.489 in pure form or even in a predictable concentration. Its liquid product has a mixed chemical composition that varies widely over time depending upon the characteristics of waste material being handled.

(f) The requirements of the New Source Performance Standard for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes (40 CFR 60, Subpart RRR), which is incorporated by reference as 326 IAC 12, are not included in the permit because this source does not have a reactor process, as defined in 40 CFR 60.701 and does not manufacture any of the materials listed in 40 CFR 60.707.

(g) The requirements of New Source Performance Standard (NSPS) for Commercial and Industrial Solid Waste Incinerations Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001, 40 CFR 60, Subpart CCCC (60.2000 through 60.2265), which is incorporated by reference as 326 IAC 12, are not included in this permit because the source does not have a Commercial and industrial solid waste incineration (CISWI) unit as defined in defined in 40 CFR 60.2265.

Under 40 CFR 60.2265, the definition of solid waste includes discarded material, including contained gaseous material, resulting from industrial, commercial, mining, agricultural operations, and from community activities. The source processes solid, liquid, and gaseous wastes in order to reuse/recycle materials as usable products, using air pollution control equipment to collect/destroy any uncollected particulate and VOC emissions from the processes. The flares used as this source will not combust "contained gaseous materials" as defined by 40 CFR 60.2265, because the VOC combusted is not in a container that is also combusted. The flares at this source, which are considered air pollution control equipment, are each not condisidered a commercial and industrial solid waste incineration (CISWI) unit as defined by 40 CFR 60.2265, since a commercial and industrial solid waste incineration (CISWI) unit does not include air pollution control equipment.

(h) The requirements of the New Source Performance Standards for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004 or for Which Modification or Reconstruction is commenced on or After June 16, 2006, 40 CFR 60, Subpart EEEE (60.2280 through 60, 2891), which is incorporated by reference as 326 IAC 12, are not included in this permit, since the processes at this source will not burn solid waste as defined in 40 CFR 60.2977.

Under 40 CFR 60.2977, the definition of solid waste includes discarded material, including contained gaseous material, resulting from industrial, commercial, mining, agricultural operations, and from community activities. The source processes solid, liquid, and gaseous wastes in order to reuse/recycle materials as usable products, using air pollution control equipment to collect/destroy any uncollected particulate and VOC emissions from the processes. The flares used as this source will not combust "contained gaseous materials" as defined by 40 CFR 60.2265, because the organic gases combusted are not in a container that is also combusted. The flares at this source, which are considered air pollution control equipment, are each not condisidered a commercial and industrial solid waste incineration (CISWI) unit as defined by 40 CFR 60.2977, because the VOC combusted is not in a container that is also combusted. The flares at this source, which are considered air pollution control equipment, are each not condisidered another solid waste incineration (OSWI) unit as defined in 40 CFR 60.2977, since another solid waste incineration (OSWI) unit does not include air pollution control equipment.

(i) The diesel-fired emergency generator (896 HP) is subject to New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, 40 CFR Part 60, Subpart IIII, which is incorporated by reference as 326 IAC 12, because it commenced construction after July 11, 2005 and was manufactured after April 1, 2006.

The diesel-fired emergency generator is subject to the following requirements of 40 CFR Part 60, Subpart IIII:

(1) 40 CFR 60.4200(a)(2)
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4209(a)
(6) 40 CFR 60.4211(a), (c) & (f)
(7) 40 CFR 60.4214(b)
(8) 40 CFR 60.4218
(9) 40 CFR 60.4219
(10) Table 8

(j) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

(a) This source is subject to the requirements of National Emission Standard for Hazardous Air Pollutants (NESHAP) for Equipment Leaks (Fugitive Emission Sources), 40 CFR 61, Subpart V (incorporated by reference as 326 IAC 14-8), because it contains valves, pumps, and sampling connections which operate in volatile hazardous air pollutant service. This is a Title I change.

The source is subject to the following requirements of 40 CFR 61, Subpart V:

(1) 40 CFR 61.240
(2) 40 CFR 61.241
(3) 40 CFR 61.242-1
(4) 40 CFR 61.242-2
(5) 40 CFR 61.242-7
(6) 40 CFR 61.242-8
(7) 40 CFR 61.242-10
(8) 40 CFR 61.242-11
(9) 40 CFR 61.245
(10) 40 CFR 61.246
(11) 40 CFR 61.247

The provisions of 40 CFR 61 Subpart A – General Provisions, which are incorporated as 326 IAC 14-1, apply to source except when otherwise specified in 40 CFR 61 Subpart V.

(b) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) - Equipment Leaks from Fugitive Emission Sources of Benzene, 40 CFR Part 61, Subpart J (incorporated by reference as 326 IAC 14-7), are not included in this permit for this modification. The new units as part of SDS II do not have any components that will be in benzene service, as defined in 40 CFR 61.111.

(c) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) - Benzene Emissions from Benzene Storage Vessels 40 CFR Part 61, Subpart Y are not included in the permit for this modification. The new storage tanks (Tanks 81 through 87, F-01 and F-02) will not store benzene.

(d) The requirements of National Emission Standards for Hazardous Air Pollutants for for Benzene Waste Operations 40 CFR 61, Subpart FF are included in the permit for SDS II.

Currently as planned, SDS II will not accept any of the material listed in this rule. However, to provide flexibility in the future, the source has requested that the requirements to be included in the permit.

The SDS II is subject to the following requirements of 40 CFR 61, Subpart FF:

(1) 40 CFR 61.340;
(2) 40 CFR 61.341;
(3) 40 CFR 61.342;
(4) 40 CFR 61.343;
(5) 40 CFR 61.345;
(6) 40 CFR 61.346;
(7) 40 CFR 61.349;
(8) 40 CFR 61.350;
(9) 40 CFR 61.351;
(10) 40 CFR 61.354(a), (d), (e) and (f);
(11) 40 CFR 61.355;
(12) 40 CFR 61.356; and
(13) 40 CFR 61.357.

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart FF.

(e) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) - From the Synthetic Organic Chemical Manufacturing Industry, 40 CFR Part 63, Subpart F and Subpart G, (incorporated by reference as 326 IAC 20-11) are not included in this permit. The source does not manufacture as a primary product one or more of the chemicals listed under 40 CFR 63.100(b)(1)(i).

(f) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) - Off-Site Waste and Recovery Operations 40 CFR 63, Subpart DD (incorporated by reference as 326 IAC 20-23) are not included for the SDS II, because this operation is not considered a one of the waste management operations or recovery operations listed under 40 CFR 63.680(a)(2).

The source stated that the only units that are subject to 40 CFR 63, Subpart DD are the Hazardous waste material (HWM) tank storage, identified as Unit 1 and Hazardous waste fuel receiving/shipping , Unit 2R and Unit 2S. See Change 5 in the 'Other Changes' section of this TSD.

(g) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hazardous waste combustors 40 CFR Part 63, Subpart EEE, (incorporated by reference as 326 IAC 20-28) are not included in the permit since the Permittee does not contain any of the following operations: hazardous waste combustors: hazardous waste incinerators, hazardous waste cement kilns, hazardous waste lightweight aggregate kilns, hazardous waste solid fuel boilers, hazardous waste liquid fuel boilers, and hazardous waste hydrochloric acid production furnaces, as defined in 40 CFR 63.1200. The source processes solid, liquid, and gaseous wastes in order to reuse/recycle materials as usable products, using air pollution control equipment to collect/destroy any uncollected particulate and VOC emissions from the processes.

(h) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) for Organic Liquids Distribution (Non-Gasoline), 40 CFR 63, Subpart EEEE (incorporated by reference as 326 IAC 20-83) are not included in the permit for SDS II, because the SDS II is not considered an organic liquid distribution operation (OLD) at a major source of HAP emissions.

The applicability of this rule has been re-evalutated for some of the existing units, even though there are no physical changes to these units. Existing tanks 57 through 67 and Unit 2R and Unit 2S are subject to this rule because they are considered organic liquid distribution operation (OLD). This is a Title I change.

Tanks 57 through 67 and Unit 2R and Unit 2S are subject to the following requirements of 40 CFR 63, Subpart EEEE:

(1) 40 CFR 63.2330
(2) 40 CFR 63.2334(a)
(3) 40 CFR 63.2338
(4) 40 CFR 63.2342(a) & (d)
(5) 40 CFR 63.2343(b)
(6) 40 CFR 63.2346(a),(b),(c),(d)&(i)
(7) 40 CFR 63.2350
(8) 40 CFR 63.2354
(9) 40 CFR 63.2358
(10) 40 CFR 63.2362
(11) 40 CFR 63.2366
(12) 40 CFR 63.2370
(13) 40 CFR 63.2374
(14) 40 CFR 63.2378
(15) 40 CFR 63.2382
(16) 40 CFR 63.2386
(17) 40 CFR 63.2390
(18) 40 CFR 63.2394
(19) 40 CFR 63.2396
(20) 40 CFR 63.2398
(21) 40 CFR 63.2402
(22) 40 CFR 63.2406
(23) Table 1
(24) Table 2
(25) Table 4
(26) Table 5
(27) Table 6
(28) Table 7
(29) Table 8
(30) Table 10
(31) Table 11
(32) Table 12

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart EEEE.

(i) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Organic Chemical Manufacturing 40 CFR 63, Subpart FFFF (incorporated by reference as 326 IAC 20-84) are not included for the SDS II, because it does not meet the definition of a miscellaneous organic chemical manufacturing process, as defined in 40 CFR 63.2550.

The applicability of this rule has been re-evalutated for some of the existing units, even though there are no physical changes to these units. The existing Pot Still, Thin Film Evaporator and Distillation Unit are considered miscellaneous organic chemical manufacturing processes, as defined in 40 CFR 63.2550, and therefore are subject to this rule. This is a Title I change.

The existing Pot Still, Thin Film Evaporator and Distillation Unit are subject to the following parts of 40 CFR 63, Subpart FFFF:

(1) 40 CFR 63.2430
(2) 40 CFR 63.2435(a),(b),(d) and (e)
(3) 40 CFR 63.2440
(4) 40 CFR 63.2445(a)(2),(c),(d) and (f)
(5) 40 CFR 63.2450(a),(b),(c),(e),(g),(h),(l),(m) and (p)
(6) 40 CFR 63.2455(a) and (b)
(7) 40 CFR 63.2465
(8) 40 CFR 63.2470
(9) 40 CFR 63.2475
(10) 40 CFR 63.2480(a) and (b)
(11) 40 CFR 63.2505
(12) 40 CFR 63.2515
(13) 40 CFR 63.2520
(14) 40 CFR 63.2525(a)-(f)
(15) 40 CFR 63.2540
(16) 40 CFR 63.2545
(17) 40 CFR 63.2550
(18) Table 1
(19) Table 3
(20) Table 4
(21) Table 5
(22) Table 6
(23) Table 8
(24) Table 9
(25) Table 11
(26) Table 12

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart FFFF.

(j) The diesel-fired emergency generator (896 HP) is subject to the requirements of 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because it is considered a new (construction commenced on or after December 19, 2002) stationary reciprocating internal combustion engine (RICE) at a major source of hazardous air pollutants (HAP).

The diesel-fired emergency generator is subject the following applicable portions of 40 CFR 63, Subpart ZZZZ:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(b)(1)(i)
(4) 40 CFR 63.6605(b)
(5) 40 CFR 63.6640(f)
(6) 40 CFR 63.6645(f)
(7) 40 CFR 63.6665
(8) 40 CFR 63.6670
(9) 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, the diesel-fired emergency generator does not have to meet the requirements of 40 CRF 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at a major source of HAP emissions.

(k) The Anaerobic Thermal Desorption Unit, ATDU II, is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and

Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (incorporated by reference as 326 IAC 20-95) because it is a process heater as defined in 40 CFR 63.7575. It transfers heat indirectly to the shredded material charged to the ATDU. As defined by 40 CFR 63.7575, 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.

The ATDU II is subject to the following requirements of 40 CFR 63, Subpart DDDDD:

(1) 40 CFR 63.7485
(2) 40 CFR 63.7490(a)(2) & (b)
(3) 40 CFR 63.7495(a)
(4) 40 CFR 63.7499(l)
(5) 40 CFR 63.7500
(6) 40 CFR 63.7505(a)
(7) 40 CFR 63.7510(g)
(8) 40 CFR 63.7515(d)
(9) 40 CFR 63.7530(d), (e) and (f)
(10) 40 CFR 63.7540(a)
(11) 40 CFR 63.7545(a),(c) and (e)
(12) 40 CFR 63.7550
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570
(17) 40 CFR 63.7575
(18) Table 3

The ATDU is also subject to 40 CFR 63, Subpart DDDDD. This is a new requirement for an existing unit. This is a Title I change.

The ATDU is subject to the following requirements of 40 CFR 63, Subpart DDDDD:

(1) 40 CFR 63.7485
(2) 40 CFR 63.7490(a)(2) & (b)
(3) 40 CFR 63.7495(b)
(4) 40 CFR 63.7499(l)
(5) 40 CFR 63.7500
(6) 40 CFR 63.7505(a)
(7) 40 CFR 63.7510(e)
(8) 40 CFR 63.7515(d)
(9) 40 CFR 63.7530(d), (e) and (f)
(10) 40 CFR 63.7540(a)
(11) 40 CFR 63.7545(a),(b) and (e)
(12) 40 CFR 63.7550
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570
(17) 40 CFR 63.7575
(18) Table 3

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart DDDDD.

(k) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

(l) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
SDS Shredder II	Carbon adsorption	Y	7.1	0.14	100	N	N
Tank 81	Carbon adsorption	Y	0.11	0.002	100	N	N
Tank 82	Carbon adsorption	Y	0.11	0.002	100	N	N
Tank 83	Carbon adsorption	Y	0.11	0.002	100	N	N
Tank 84	Carbon adsorption	Y	0.11	0.002	100	N	N
Tank 85	Carbon adsorption	Y	0.24	0.005	100	N	N
Tank 86	Carbon adsorption	Y	0.23	0.005	100	N	N
Tank 87	Carbon adsorption	Y	0.27	0.005	100	N	N
SHS - PM/ PM10/PM2.5	Baghouse	Y	330.4	6.6	100	Y	N
SDS II VRU II - VOC	Flare	Y	4656.3	93.1	100	Y	N
SDS II VRU II - CO	Flare	Y	4656.3	<100	100	Y	N
SDS II VRU II - Hexane	Flare	N	1808.6	36.2	100	N	N
SDS II Shredder II - VOC	Carbon adsorption	N	7.1	0.1	100	N	N
F-01- VOC	Carbon adsorption	N	0.1	0.0024	100	N	N
F-02- VOC	Carbon adsorption	N	0.02	0.0004	100	N	N
SDS VRU - VOC	Flare	Y	2328.1	46.6	100	Y	N
SDS VRU - CO	Flare	Y	809.2	16.2	100	Y	N
SDS VRU - Hexane	Flare	N	904.3	18.1	25	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the SDS VRU for VOC and CO upon issuance of this modification. A CAM plan will be incorporated into this permitting action.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the SHS for PM/PM10/PM2.5 and the SDS II VRU II for VOC and CO upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-1.1-5 (Nonattainment New Source Review)
Nonattainment New Source Review applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.

326 IAC 2-2 and 2-3 (PSD and Emission Offset)
PSD and Emission Offset applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the VRU II will emit greater than ten (10) tons per year for a single HAP. Therefore, 326 IAC 2-4.1 would apply to the VRU II, however, pursuant to 326 IAC 2-4.1-1(b)(2), because this VRU II is specifically regulated by 40 CFR 61, Subpart V and NESHAP 40 CFR 61, Subpart FF, which is issued pursuant to Section 112(d) of the CAA, the VRU II is exempt from the requirements of 326 2-4.1.

The operation of all other units as part of SDS II will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
Since this source is located in Lake County, and has a potential to emit VOC greater than or equal to twenty-five (25) tons per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 8-1-6 (Volatile Organic Compounds - BACT)
Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), Best Available Control Technology (BACT) is required for all facilities constructed after January 1, 1980 that have potential VOC emissions of equal to or greater than twenty-five (25) tons per year and are not regulated by other rules in 326 IAC 8.

The proposed new Solids Distillation System (SDS II) has potential VOC emissions greater than twenty-five (25) tons per year. In addition, the Permittee provided additional information on July 8, 2014, regarding potential emissions from the existing Solids Distillation System (SDS). Based on the information provided, the total combined potential VOC emissions from the Solids Distillation System (SDS), Distillation Unit, Tanks 52-55, and the Pot Still is greater than twenty-five (25) tons per year.

Therefore, the Permittee is required to control VOC emissions from the emission units associated with the SDS and SDS II systems, the Distillation Unit, Tanks 52-55, and the Pot Still pursuant to the provisions of 326 IAC 8-1-6 (BACT).

According to the BACT analysis contained in Appendix B of this TSD, IDEM, OAQ has determined that the following requirements represent BACT for the SDS and SDS II systems, the Distillation Unit, Tanks 52-55, and the Pot Still:

Pursuant to 326 IAC 8-1-6 (BACT) and SSM 089-34432-00345, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The vapor recovery units, SDS VRU and SDS II VRU II, shall be controlled by open flare FL1 with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that SDS VRU and/or SDS II VRU II are in operation, except during maintenance or malfunction of the flare FL1. During maintenance or malfunction of the flare FL1, the SDS VRU shall be controlled by the carbon adsorption system (C18) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS VRU is in operation and the SDS II VRU II shall be controlled by the carbon adsorption system (C38) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS II VRU II is in operation.

(b) VOC emissions after control from the SDS VRU shall be less than 23.4 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Each of the emission units listed in the table below shall be controlled by the associated carbon adsorption system with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that each of these emission units are in operation.

Emission Unit(s)	Carbon Adsorption System
SDS Shredder	C14
Anaerobic Thermal Desorption System enclosed feed conveyor	C15
Oil-Water Separator	C16
Water Tank	C17
Distillation Unit	C19
Tank 55	C20
Tanks 52 through 54	C21
Pot Still	C33
SDS Shredder II	C37
F-01 and F-02	C39
Tanks 81 through 84	C40
Tank 85	C41
Tank 86	C42
Tank 87	C43

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties)
At this time, IDEM, OAQ is unable to determine if any of the existing units should have been subject to 326 IAC 8-7. The applicability determination will be made at the next Part 70 Operating Permit Renewal. New units added as part of this modification were evaluated for applicability under 326 IAC 8-1-6.

326 IAC 8-20 (Industrial Wastewater)
This rule applies to any source that generates process wastewater and meets all of the following criteria:

(1) Is located in Lake County or Porter County.
(2) Has the combined total potential to emit VOC emissions equal to or greater than one hundred (100) tons per year from all of the following:
  (A) Industrial wastewater sources (all waste management units).
  (B) All noncontrol technique guideline (non-CTG) sources.
  (C) Unregulated emissions from CTG emission units, except emission units regulated under 40 CFR 60, Subpart BBB*; 40 CFR 60, Subpart III*; 40 CFR 60, Subpart NNN*; or 40 CFR 63, Subpart T*.

(3) Has facility operations specifically listed under any of the following industrial categories:
- (A) Organic chemicals, plastics, and synthetic fibers manufacturing industry under Standard Industrial Classification (SIC) codes 2821, 2823, 2824, 2865, and 2869.
- (B) Pharmaceutical industry under SIC codes 2833, 2834, and 2836.
- (C) Pesticide manufacturing industry under SIC code 2879.
- (D) Hazardous waste treatment, storage, and disposal facilities under SIC codes 4952, 4953, and 4959.

Pursuant to 326 IAC 8-20-1(a), the source is located in Lake County, has the combined total PTE of VOC greater than 100 tons per year of non-control technique guideline (non-CTG) sources, and has operations listed in SIC 4953. However, the source does not have any waste management units, pursuant to the definition in 326 IAC 8-20-2(49)(D) and therefore there are no applicable requirements. As specified under 326 IAC 8-20-2(49)(D), "waste management unit" does not include equipment is used for recovery, since this equipment is part of a process unit and is not a waste management unit.

Tradebe Treatment and Recycling, LLC has provided the following explanation of the wastewater generated at this source:

> No water is processed in the ATDU's, the water is a result of the processing of solid material in an ATDU. The water used by the SDS operations is part of the process.
>
> All materials have moisture and when they are heated the moisture is driven out of the material (i.e., steam) and some in entrained with the solvent vapors. The vaporized solvent/steam gases are cooled with contact water in the VRU. When cooled, the moisture and solvent re-condenses into a solvent – water solution. This solution is sent to the Oil Water Separator (OWS) where gravity allows the solvent to separate from the water (2 distinct phases). The solvent solution is sent to a tank where it is accumulated prior to being loaded on vehicles for shipment off site as the SDS Degreaser.
>
> The water is sent to a different tank where it continues to cool and is reused in the cooling process (VRU). Because everything has moisture in it (either the material or the packaging, such as cardboard, wood) from humidity or from precipitation, the SDS process generates 3,000 – 5,000 gallons (depending in what is processed) in a 24 hour period. This excess water is removed from the cooling tank (classified at this time as a waste) and added to the waste sent to the cement kilns.

<u>ATDU II</u>

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The ATDU II is a indirect heating unit located in Lake County. Since the limit in 326 IAC 6.8-1 is more stringent than 326 IAC 6-2, the ATDU II is subject to 326 IAC 6.8-1 and not subject to 326 IAC 6-3-2.

326 IAC 6.8 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6.8-1, the particulate matter (PM) from the ATDU II shall not exceed three-hundredth (0.03) grain per dry standard cubic foot (dscf).

In addition, the existing natural gas fired heater associated with the ATDU is being re-evaluated under 326 IAC 6.8-1, because it was overlooked in previous reviews.

Pursuant to 326 IAC 6.8-1, the particulate matter (PM) from the ATDU shall not exceed three-hundredth (0.03) grain per dry standard cubic foot (dscf).

<u>SHS and cooling tower</u>

326 IAC 6.8 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6.8-1, the particulate matter (PM) from the SHS and cooling tower SDS II 13 shall each not exceed three-hundredth (0.03) grain per dry standard cubic foot (dscf).

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The SHS and cooling tower are not subject to the requirements of 326 IAC 6-3-2, because these units are subject to a more stringent particulate matter limitation under 326 IAC 6.8.

Existing Shipping/Receiving Unit 2

326 IAC 8-1-6 (Volatile Organic Compounds)
The applicability of this rule has been reevaluated for some of the existing units, even though there are no physical changes to these units. In order to more clearly describe existing emission units, the existing shipping/receiving unit 2 has been separated into two units. Unit 2R (Receiving) and Unit 2S (Shipping) better reflect these operations. In addition, the emission calculations for Unit 2 (now Unit 2R and 2S) have been corrected to indicate that the maximum throughput of Unit 2R is 17,200 gal/hr and the maximum throughput of Unit 2S is 13,200 gal/hr. As a result of the corrected calculations, the uncontrolled/unlimited potential to emit VOC is greater than 25 tons per year. The source has requested VOC limits on Units 2R and 2S of less than 25 tons per year in order to render the requirements of 326 IAC 8-1-6 not applicable to Unit 2R and Unit 2S.

In order to render 326 IAC 8-1-6 (BACT) not applicable to Unit 2R and Unit 2S, Permittee shall comply with the following:

(a) The throughput to Unit 2R and Unit 2S shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.

(b) Loading loss VOC emissions from Unit 2R and Unit 2S shall each not exceed 1.03 pounds of VOC per 1,000 gallons of liquid material throughput.

Compliance with these limits shall limit the VOC emissions from Unit 2R and Unit 2S to less than 25 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 8-1-6 not applicable to Unit 2R and Unit 2S.

Tanks 81 through 87, F-01 and F-02

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
Pursuant to 326 IAC 8-9-1, stationary vessels located in Lake County, with a capacity less than thirty-nine thousand (39,000) gallons, are subject to the reporting and record keeping provisions of sections 326 IAC 8-9-6(a) and 326 IAC 8-9-6(b) of this rule and are exempt from all other provisions of this rule. Tanks 81 through 87, F-01 and F-02 are applicable to 326 IAC 8-9-6(a) & (b).

The Permittee shall maintain records of the following for the life of each vessel:

(1) The vessel identification number;
(2) The vessel dimensions;
(3) The vessel capacity; and
(4) A description of the emission control equipment for each vessel described in 326 IAC 8-9-4(a) and 4(b), if applicable, or a schedule for installation of emission control equipment on vessels described in 326 IAC 8-9-4(a) and 4(b), if applicable, with a certification that the emission control equipment meets the applicable standards.

Emergency Generator

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The diesel-fired emergency generator is not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, it does not meet the definition of an indirect heating unit.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The diesel-fired emergency generator is exempt from the requirements of 326 IAC 6-3, because, it is not considered a "manufacturing processes", and pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
Pursuant to 326 IAC 7-1.1-1, the diesel-fired emergency generator is not subject to the requirements of 326 IAC 7-1.1, since it has unlimited sulfur dioxide (SO_2) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The diesel-fired emergency generator is is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to this source since it does not operate any of the categories of facilities regulated by this rule.

326 IAC 10-4 (Nitrogen Oxides Budget Trading Program)
The requirements of 326 IAC 10-4 do not apply to this source since it does not operate electricity generating units or large affected units is defined in 326 IAC 10-4-2(27).

326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The source does not operate any large NOx SIP call engines. Therefore, 326 IAC 10-5 does not apply.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Compliance Determination Requirements

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Limit or Requirement**
VRU II	Flare FL1	Within 180 days after issuance of issuance of permit 089-34503-00345	VOC	Once every 5 years from last valid compliance demonstration	40 CFR 60.18
VRU II	Flare FL1		CO		
VRU	Flare FL1		VOC		
VRU	Flare FL1		CO		

- These testing conditions are required to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), 326 IAC 8-1-6 (VOC), and 326 IAC 2-7 (Part 70)).
- No testing will be required for the solids handling system because only approximately 75% overall control efficiency is required to comply with applicable requirements.

Compliance Monitoring Requirements

Control	Parameter	Frequency	Range	Excursions and Exceedances
Flare FL1	Presence of flare pilot flame	Daily	Normal-Abnormal	Response Steps
Baghouse BH34	Water Pressure Drop	Daily	2.0 to 6.0 inches	Response Steps
	Replace broken or failed bags	As needed	NA	NA
All carbon adsorption systems (carbon canisters) associated with SDS and SDS II	VOC detection	Daily	VOC outlet concentration greater than or equal to two percent (2%) of inlet concentration	Response Steps

NA = Not Applicable

These monitoring conditions are necessary because:

- Flare FL1 must operate properly to ensure compliance with 326 IAC 2-3 (Emission Offset), 326 IAC 8-7 (VOC), 40 CFR 64 (CAM), 326 IAC 2-7 (Part 70), and the limits that render 326 IAC 2-2 (PSD) not applicable.
- Baghouse BH3 must operate properly to ensure compliance with 326 IAC 6.8 (Particulate Emission Limitations for Lake County), 326 IAC 2-7 (Part 70), and the limits that render 326 IAC 2-2 (PSD) not applicable.
- All carbon adsorption systems (carbon canisters) associated with SDS and SDS II must operate properly to ensure compliance with 326 IAC 2-3 (Emission Offset), 326 IAC 8-7 (VOC), 40 CFR 64 (CAM), 326 IAC 2-7 (Part 70), and the limits that render 326 IAC 2-3 (Emission Offset) not applicable.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T 089-29424-00345. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: The new SDS II units have been added to the permit. As a result of this modification, the source is considered a Major Source under 326 IAC 2-3 Emission Offset.

Change 2: The PTE calculations for the existing Vapor Recovery Unit (VRU) were not previously included correctly. Based on the updated PTE calculations, a separate Emission Offset minor limit is needed in order to correctly limit VOC and a PSD minor limit is needed in order to limit source-wide CO emissions to less than 250 tons per year. Also, the requirements of 326 IAC 8-1-6 have been added to the permit for the existing VRU.

Change 3: Existing Condition D.1.5 required testing of Lab Pack Booth 1 by December 6, 2012. This testing has been completed. Therefore, existing Condition D.1.5 can be removed from the permit. This also satisfies the requirement of existing condition D.1.1(a) and therefore this condition can also be removed:

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

.....

Source Status: Part 70 Operating Permit Program
Minor Source, under PSD ~~and Emission Offset Rules~~
Major Source, under Emission Offset Rules
Major Source, Section 112 of the Clean Air Act

.....

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:

.....

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

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SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

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(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(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 Emission Offset Minor Limit [326 IAC 2-3]~~[326 IAC 8-1-6]~~

~~(a) The IDEM, OAQ has information that indicates that several facilities described in this section may be subject to the requirements of 326 IAC 2-3 (Emission Offset), 326 IAC 8-1-6 (BACT), and 326 IAC 8-7. Specifically, IDEM, OAQ questions the efficiency of the capture system associated with the carbon controls on Lab Pack Booth 1. Also, IDEM, OAQ has been unable to validate the source's calculations for stack emissions from these facilities. Therefore, the Permit Shield provided in Section B of this permit does not apply to Lab Pack Booth 1 with regards to 326 IAC 2-3, 326 IAC 8-1-6 and 326 IAC 8-7. Once this matter is resolved, the OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to address the aforementioned rules, and a schedule for achieving compliance with any requirements.~~

(~~b~~a) Pursuant to MSM 089-15970-00345, issued December 2, 2003, and MPM 089-18513-00345, issued February 4, 2004, and as revised by this Part 70 permit, the VOC emissions from the SDS shredder, Solids Distillation System and Distillation Unit shall not exceed the emission limits listed in the table below:

Unit ID	Stack(s) ID	VOC Emission Limit (lb/hr)
SDS Shredder	SDS 01(a) and (b).	0.028, total
Solids Distillation System*	SDS 02, SDS 03, SDS 04, ~~SDS 07,~~ SDS 08, and SDS 09	0.169, total
Distillation Unit	SDS 05	0.014

* Not including the SDS Shredder

(b) In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for the 2003 modification, the Permittee shall comply with the following:

VOC emissions after control from the SDS VRU shall be less than 23.4 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits ~~is equivalent to less than or equal to VOC emissions of 0.92 tons per year. Combined with the VOC emissions from product tanks 02 through 04, condensed liquid tank 01 and the insignificant combustion units, the VOC emissions from the modification permitted via MSM 089-15970-00345, issued December 2, 2003, are equal~~**shall limit VOC emissions** to less than 25 tons per ~~year~~ **twelve (12) consecutive month period from the emission units added in as part of MSM 089-15970-00345, issued December 2, 2003.** Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable to these units **from the 2003 modification.**

(c) In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for the 2015 modification, the Permittee shall comply with the following:

VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, along with emissions from the pot still and emergency generator, shall limit the potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable for this 2015 modification.

D.1.2 PSD Minor Limit [326 IAC 2-2]

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

(a) PM emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(b) PM_{10} emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(c) $PM_{2.5}$ emissions after control from the SHS shall not exceed 18.9 pounds per hour.

(d) CO emissions (after control) from the SDS VRU shall not exceed 7.4 pounds per hour of SDS vapor product processed.

(e) CO emissions (after control) from the SDS VRU II shall not exceed 7.4 pounds per hour of SDS II vapor product processed.

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

D.1.3 Best Available Control Technology (BACT) - VOC [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT) and SSM 089-34432-00345, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The vapor recovery units, SDS VRU and SDS II VRU II, shall be controlled by open flare FL1 with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that SDS VRU and/or SDS II VRU II are in operation, except during maintenance or malfunction of the flare FL1. During maintenance or malfunction of the flare FL1, the SDS VRU shall be controlled by the carbon adsorption system (C18) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS VRU is in operation and the SDS II VRU II shall be controlled by the carbon adsorption system (C38) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS II VRU II is in operation.

(b) VOC emissions after control from the SDS VRU shall be less than 23.4 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Each of the emission units listed in the table below shall be controlled by the associated carbon adsorption system with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that each of these emission units are in operation.

Emission Unit(s)	Carbon Adsorption System
SDS Shredder	C14
Anaerobic Thermal Desorption System enclosed feed conveyor	C15
Oil-Water Separator	C16
Water Tank	C17
Distillation Unit	C19

Emission Unit(s)	Carbon Adsorption System
Tank 55	**C20**
Tanks 52 through 54	**C21**
Pot Still	**C33**
SDS Shredder II	**C37**
F-01 and F-02	**C39**
Tanks 81 through 84	**C40**
Tank 85	**C41**
Tank 86	**C42**
Tank 87	**C43**

D.1.~~2~~**5** Particulate Emission Limitations for for Lake County [326 IAC 6.8-1]

Pursuant to 326 IAC 6.8-1-2, particulate matter from the shaker and conveyor system section of the Solids Distillation System (exhausting to stacks SDS 04 and SDS 09), **solids handling system (SHS), the natural gas fired heater associated with the ATDU, the natural gas fired heater associated with ATDU II and cooling tower SDS II 13,** shall **each** not exceed 0.03 grain per dry standard cubic foot.

D.1.~~3~~**6** Volatile Organic Compounds (VOC) [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the following applies to HWF mix blend and storage tanks 1R, 4, 18, 19, 20, 21, 22, and 23, HWF blending and storage tanks 6 and 7, tank 24HP, tank 25HD, HWF receiving and storage tank 29, RCRA hazardous waste tanks 52, 53, 54 and 68, condensed liquid tank 55**,** ~~and~~ product tanks 57 through 67, **Tanks 81 through 87, F-01 and F-02**

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D.1.~~4~~**7** Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.1.~~5~~**8** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

~~In order to determine the applicability of 326 IAC 8-1-6 and 326 IAC 8-7, the Permittee shall perform VOC testing on Lab Pack Booth 1 on or before December 6, 2012, utilizing methods approved by the Commissioner. Testing shall be performed to determine VOC capture and destruction efficiency and shall be conducted in accordance with Section C - Performance Testing.~~

In order to demonstrate compliance with Conditions D.1.1(b), D.1.1(c), and D.1.3(a), the Permittee shall perform testing of flare FL1 controlling the SDS VRU and SDS II VRU II pursuant to the requirements of 40 CFR 60.18, utilizing methods as approved by the Commissioner, not later than one hundred and eighty (180) days after initial issuance of this permit, 089-34503-00345. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this section.

D.1.9 VOC Emissions

Compliance with the VOC limit contained in Condition D.1.1(c) shall be determined using the following equations:

$$V_{TOT} = \sum_{m=1}^{12} \left[V_S + V_{SHS} + V_{VRUII} + V_{T81-84} + V_{T85} + V_{T86} + V_{T87} + V_{F-01} + V_{F-02} \right]$$

$$V_S = \left(W * EF_S * \left(\frac{100\% - CE_S}{100\%} \right) \right)$$

$$V_{SHS} = \left(W * EF_{SHS} \right)$$

$$V_{VRUII} = \left(W * EF_{VRUII} * \left(\frac{100\% - CE_{F-CC}}{100\%} \right) + V_F \right)$$

$$V_{T81-84} = \left(U_{T81-84} * \left(\frac{100\% - CE_{T81-84}}{100\%} \right) \right)$$

$$V_{T85} = \left(U_{T85} * \left(\frac{100\% - CE_{T85}}{100\%} \right) \right)$$

$$V_{T86} = \left(U_{T86} * \left(\frac{100\% - CE_{T86}}{100\%} \right) \right)$$

$$V_{T87} = \left(U_{T87} * \left(\frac{100\% - CE_{T87}}{100\%} \right) \right)$$

$$V_{F-01} = \left(U_{F-01} * \left(\frac{100\% - CE_{F-01}}{100\%} \right) \right)$$

$$V_{F-02} = \left(U_{F-02} * \left(\frac{100\% - CE_{F-02}}{100\%} \right) \right)$$

Where:

V_{TOT}	**=**	**Total emissions of VOC emissions after control from the SDS II (tons/year);**
m	**=**	**Each calendar month during the compliance period;**
V_S	**=**	**Total VOC emissions (after control) from the SDS II shredder per month (tons);**
V_{SHS}	**=**	**Total VOC emissions (after control) from the SDS II solids handling system per month (tons);**
V_{VRUII}	**=**	**Total VOC emissions (after control) from the SDS II VRU II per month (tons);**
V_F	**=**	**Total VOC emissions created by flare FL1 per month (tons);**
V_{T81-84}	**=**	**Total VOC emissions (after control) from the Tanks 81 through 84 per month (tons);**
V_{T85}	**=**	**Total VOC emissions (after control) from the Tank 85 per month (tons);**
V_{T86}	**=**	**Total VOC emissions (after control) from the Tank 86 per month (tons);**

V_{T87} = Total VOC emissions (after control) from the Tank 87 per month (tons);
V_{F-01} = Total VOC emissions (after control) from the F-01 per month (tons);
V_{F-02} = Total VOC emissions (after control) from the F-02 per month (tons);
W = Total weight of input material fed to shredder per month (tons);
EF_S = VOC uncontrolled emission factor for the SDS II shredder (lb/ton);
EF_{SHS} = VOC uncontrolled emission factor for the SDS II solids handling system (lb/ton);
EF_{VRUII} = VOC uncontrolled emission factor for the SDS II VRU II (lb/ton);
U_{T81-84} = VOC uncontrolled emissions for Tanks 81 through 84 (ton/yr);
W_{T85} = VOC uncontrolled emissions for Tank 85 (ton/yr);
U_{T86} = VOC uncontrolled emissions for Tank 86 (ton/yr);
U_{T87} = VOC uncontrolled emissions for Tank 87 (ton/yr);
U_{F-01} = VOC uncontrolled emissions for F-01 (ton/yr);
U_{F-02} = VOC uncontrolled emissions for F-02 (ton/yr);
CE_S = VOC control efficiency of the shredder carbon adsorption system (%);
CE_{F-CC} = VOC control efficiency of the flare FL1 or carbon adsorption system (%);
CE_{T81-84} = VOC control efficiency of the Tanks 81 through 84 carbon adsorption system (%);
CE_{T85} = VOC control efficiency of the Tank 85 carbon adsorption system (%);
CE_{T86} = VOC control efficiency of the Tank 86 carbon adsorption system (%);
CE_{T87} = VOC control efficiency of the Tank 87 carbon adsorption system (%);
CE_{F-01} = VOC control efficiency of the F-01 carbon adsorption system (%);
CE_{F-02} = VOC control efficiency of the F-02 carbon adsorption system (%);

Each of the VOC control efficiency values shall equal 98%.

D.1.10 VOC Emissions

Compliance with the VOC limit contained in Condition D.1.1(c) and D.1.3(b) shall be determined as follows:

$$V_{TOT} = \sum_{m=1}^{12}\left[W * EF_{VRU} * \left(\frac{100\% - CE_{F-CC}}{100\%}\right) + V_F\right]$$

Where:

V_{TOT} = Total emissions of VOC emissions after control from the SDS VRU (tons/year);
m = Each calendar month during the compliance period;
W = Total weight of input material fed to SDS shredder per month (tons);
EF_{VRU} = VOC uncontrolled emission factor for the SDS VRU (lb/ton);
CE_{F-CC} = VOC control efficiency of the flare FL1 or carbon adsorption system (%); (this value shall equal 98%).
V_F = Total VOC emissions created by flare FL1 per month (tons);

D.1.~~6~~**11** Emissions Controls [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) In order to ensure compliance with Condition D.1.~~2~~**5**:

(1) The baghouse shall be in operation and control particulate emissions at all times that the shaker and conveyor system section of the Anaerobic Thermal Desorption System is in operation.

(2) 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.

(b) In order to ensure compliance with Conditions D.1.2(a), D.1.2(b), and D.1.2(c):

(1) Baghouse BH3 shall be in operation and control particulate emissions at all times that the solids handling system, SHS is in operation.

(2) 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.

(c) In order to ensure compliance with Condition D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, and D.1.10:

(1) The flare FL1 shall be in operation and control VOC emissions at all times that the VRU and/or VRU II is in operation, except during maintenance or malfunction of the flare FL1. During maintenance or malfunction of the flare FL1, the carbon adsorption system (C18) shall be in operation and control VOC emissions at all times that the VRU is in operation and the carbon adsorption system (C38) shall be in operation and control VOC emissions at all times that the VRU II is in operation. For the purpose of this section, "operation of the flare" shall mean the presence of a pilot flame or equivalent. The flare shall be operated per manufacturer's specifications.

(2) The Permittee shall comply with the requirements of 40 CFR 60.18(b) (included as Attachment G) for the flare associated with the Vapor Recovery Unit (VRU).

(d) In order to ensure compliance with Conditions D.1.1(c), D.1.3(c), D.1.3(d) and D.1.9, each of the carbon adsorption systems associated with the emission unit(s) listed in the table below shall be in operation and control VOC emissions from the respective emission unit(s) at all times that the emission unit(s) are in operation:

Emission Unit(s)	Carbon Adsorption System
SDS Shredder	C14
Anaerobic Thermal Desorption System enclosed feed conveyor	C15
Oil-Water Separator	C16
Water Tank	C17
Distillation Unit	C19
Tank 55	C20
Tanks 52 through 54	C21
Pot Still	C33
SDS Shredder II	C37
F-01 and F-02	C39
Tanks 81 through 84	C40
Tank 85	C41
Tank 86	C42
Tank 87	C43

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D.1.~~7~~**12** Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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D.1.~~8~~**13** **Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

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(b) The Permittee shall monitor the pressure drop across baghouse BH3 at least once per day when the solids handling system, SHS, is in operation. When, for any one reading, the pressure drop across baghouse BH3 is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.~~9~~**14** Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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D.1.15 Flare Pilot Flame [40 CFR 64]

In order to assure compliance with Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9 and D.1.10, the Permittee shall continuously monitor the presence of the flare FL1 pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame. For the purpose of this condition, continuous means no less than once per minute.

D.1.16 Carbon Adsorber/Canister Monitoring

(a) The Permittee shall conduct inspections, at least once per day, of each carbon adsorber/canister control system associated with the SDS and SDS II systems identified in Condition D.1.11(d) when the respective emission unit(s) is in operation. Inspections shall be made at both the inlet and outlet of the control system. The inspections shall be for the detection of VOC with a portable analyzer. If the inspections indicate that the outlet concentration of VOC is greater than or equal to two percent (2%) of the inlet concentration of VOC, then the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

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

D.1.~~10~~**17** **Record Keeping Requirements**

(a) To document the compliance status with Condition D.1.~~3~~**6** - Volatile Organic Compounds, the Permittee shall maintain the records specified in that condition.

(b) To document the compliance status with Condition D.1.~~7~~**12** - Visible Emissions Notations, the Permittee shall maintain once per day records of the visible emission notations. The

Permittee shall include in its daily record when any of these records are not taken and the reason (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.1.~~8~~**13** - Parametric Monitoring, the Permittee shall maintain once per day records of the baghouse pressure drop readings. The Permittee shall include in its daily record when any of these records are not taken and the reason (e.g., the process did not operate that day).

(d) To document the compliance status with Condition D.1.4(a), the Permittee shall maintain records of the liquid material throughput of Unit 2R and Unit 2S each month and each compliance period.

(e) To document the compliance status with Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, D.1.10 and D.1.15, the Permittee shall maintain records in accordance with (1) through (9) below. Records maintained for (1) through (9) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limits and requirements established in Conditions D.1.1(b), D.1.1(c), D.1.3(a), D.1.3(b), D.1.3(c), D.1.9, D.1.10 and D.1.15.

(1) A copy of the manufacturer's operation and maintenance manual that defines operating procedures that will ensure destruction efficiency;

(2) The design specifications for the flare, and make such records available upon request to IDEM, OAQ and the U.S. EPA;

(3) Monthly records of flow rate to the flare as recorded by the flow meter, in either electronic or hard copy;

(4) Date and time when the Vapor Recovery Units (VRU and VRU II) were venting to the flare;

(5) The Permittee shall maintain monthly records in either electronic or hard copy to demonstrate the thermocouple or equivalent device detects the presence of a flame no less than once per minute on the flare when either of the Vapor Recovery Units (VRU or VRU II) were in operation;

(6) Measurements, engineering assessments, and calculations used to determine the monthly VOC emissions (before and after control) associated with each of the SDS and SDS II processes

(7) The VOC emissions (after control) for each month and each compliance period for the SDS and the SDS II; and

(8) The results from the most recent valid stack test for flare FL1.

(f) To document the compliance status with Condition D.1.16, the Permittee shall maintain records of the inspections required under Condition D.1.16. The Permittee shall also maintain the following records:

(1) The normal carbon bed changeout frequency and any supporting information, including, but not limited to, performance test data, monitoring data, the carbon bed adsorption capacity, and pollutant loading;

(2) Carbon adsorber monitoring data, pollutant breakthrough data; and

(3) Date(s) of carbon bed changeout/replacement.

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

D.1.18 Reporting Requirements

Quarterly summaries of the information to document the compliance status with Conditions D.1.3(a), D.1.4(a), D.1.9 and D.1.10 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, 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 reports submitted by the Permittee 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).

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SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare (FL2) as primary VOC control and carbon canisters as backup VOC control (C9).

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(c) One (1) materials manual lab packing, depacking, and bulking operation, identified as Unit 4, with a maximum capacity of 27,375 pack containers per year, constructed in 1992, including three insignificant booths located in Area 5 in addition to the following equipment:

(1) One (1) booth for manual lab packing, depacking and bulking of organic materials, identified as Lab Pack Booth 1, using a single carbon canister for VOC control (C13), and exhausting to stack LP S1.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system for VOC control (C14), exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control (C15), exhausting to SDS 03.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control (C16), exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control (C17), exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare (FL1) with a demister (and a carbon adsorption system as backup (C18)) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control (BH1-BH2), exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system (C20), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system (C21), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters (C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 70 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(l) One (1) degassing operation, constructed in 2008 and approved in 2014 for modification, with a maximum degassing rate of 405.8 tons of gasses per year. The degassing operation includes a reactor tank into which gasses are vented and a pressurized "shock" tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare (FL3) or carbon canisters (C36).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

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

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61, Subpart A] [326 IAC 14-1]

Pursuant to 40 CFR 61, the Permittee shall comply with the provisions of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 14-1, for the above listed emissions units, except when otherwise specified in 40 CFR 61, 61, Subpart FF.

E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Benzene Waste Operations [40 CFR 61, Subpart FF]

The Permittee shall comply with the following provisions of 40 CFR 61 Subpart FF (included as Attachment A to this permit), for the above listed emissions units:

(1) 40 CFR 61.340;
(2) 40 CFR 61.341;
(3) 40 CFR 61.342;
(4) 40 CFR 61.343;
(5) 40 CFR 61.345;
(6) 40 CFR 61.346;
(7) 40 CFR 61.349;
(8) 40 CFR 61.350;
(9) 40 CFR 61.351;
(10) 40 CFR 61.354(a), (d), (e) and (f);
(11) 40 CFR 61.355;
(12) 40 CFR 61.356; and
(13) 40 CFR 61.357.

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Entire Source

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

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

E.3.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61, Subpart A] [326 IAC 14-1]

Pursuant to 40 CFR 61, the Permittee shall comply with the provisions of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 14-1, for the above listed emissions units, except when otherwise specified in 40 CFR 61, Subpart V.

E.3.2 Equipment Leaks (Fugitive Emission Sources) NESHAP Requirements [40 CFR 61, Subpart V] [326 IAC 14-8]

The Permittee shall comply with the following provisions of 40 CFR 61 Subpart V (included as Attachment B to this permit), which are incorporated by reference as 326 IAC 14-8, for the above listed emissions units:

(1) 40 CFR 61.240
(2) 40 CFR 61.241
(3) 40 CFR 61.242-1
(4) 40 CFR 61.242-2
(5) 40 CFR 61.242-7
(6) 40 CFR 61.242-8
(7) 40 CFR 61.242-10

(8) 40 CFR 61.242-11
(9) 40 CFR 61.245
(10) 40 CFR 61.246
(11) 40 CFR 61.247

.....

SECTION E.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

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

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

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E.5.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the ATDU II, except when otherwise specified in 40 CFR 63, Subpart DDDDD.

E.5.2 Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [40 CFR 63, Subpart DDDDD] [326 IAC 20-95]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart DDDDD (included as Attachment E to this permit), which are incorporated by reference as 326 IAC 20-95 for the ATDU II:

ATDU:

(19) 40 CFR 63.7485
(20) 40 CFR 63.7490(a)(2) & (b)
(21) 40 CFR 63.7495(b)
(22) 40 CFR 63.7499(l)
(23) 40 CFR 63.7500
(24) 40 CFR 63.7505(a)
(25) 40 CFR 63.7510(e)
(26) 40 CFR 63.7515(d)

(27) 40 CFR 63.7530(d), (e) and (f)
(28) 40 CFR 63.7540(a)
(29) 40 CFR 63.7545(a),(b) and (e)
(30) 40 CFR 63.7550
(31) 40 CFR 63.7555(a)
(32) 40 CFR 63.7560
(33) 40 CFR 63.7565
(34) 40 CFR 63.7570
(35) 40 CFR 63.7575
Table 3
.....

ATDU II:

(1) 40 CFR 63.7485
(2) 40 CFR 63.7490(a)(2) & (b)
(3) 40 CFR 63.7495(a)
(4) 40 CFR 63.7499(l)
(5) 40 CFR 63.7500
(6) 40 CFR 63.7505(a)
(7) 40 CFR 63.7510(g)
(8) 40 CFR 63.7515(d)
(9) 40 CFR 63.7530(d), (e) and (f)
(10) 40 CFR 63.7540(a)
(11) 40 CFR 63.7545(c) and (e)
(12) 40 CFR 63.7550
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570
(17) 40 CFR 63.7575
(18) Table 3

.....

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

Quarterly Report

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345
Facility: Vapor Recovery Unit (VRU) associated with SDS
Parameter: VOC emissions (after control)
Limit: VOC emissions (after control) from the Vapor Recovery Unit (VRU) shall not exceed 23.4 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall be determined using the equation contained in Condition D.1.10.

QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Quarterly Report

Source Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, Indiana 46312
Part 70 Permit No.: T 089-29424-00345
Facility: SDS II
Parameter: VOC emissions (after control)
Limit: VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month

Compliance with this limit shall be determined using the equation contained in Condition D.1.9.

QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Other Changes

The changes listed below have been made to Part 70 Operating Permit No. T 089-29424-00345. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

.....

Change 4: Existing receiving/shipping Unit 2 has been separated into two units. In addition, the emission calculations for Unit 2 (now Unit 2R and 2S) have been corrected to indicate that the maximum capacities are 17,000 and 13,200 gallons per hour. As a result of the corrected calculations, the uncontrolled/unlimited potential to emit VOC is greater than 25 tons per year. The source has requested VOC limits on Units 2R and 2S of less than 25 tons per year in order to render the requirements of 326 IAC 8-1-6 not applicable to Unit 2R and Unit 2S. 326 IAC 8-1-6 avoidance limits have been added to the permit (This is a Title I change). 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:

.....

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2**R**, with a maximum capacity of **1**7,200 gallons of liquid material per hour, **and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour**, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

.....

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2**R**, with a maximum capacity of **1**7,200 gallons of liquid material per hour, **and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour**, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

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

.....

D.1.4 VOC Limitation [326 IAC 8-1-6]

In order to render 326 IAC 8-1-6 (BACT) not applicable to Unit 2R and Unit 2S, Permittee shall comply with the following:

(a) The throughput to Unit 2R and Unit 2S shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.

(b) Loading loss VOC emissions from Unit 2R and Unit 2S shall each not exceed 1.03 pounds of VOC per 1,000 gallons of liquid material throughput.

Compliance with these limits shall limit the VOC emissions from Unit 2R and Unit 2S to less than 25 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 8-1-6 not applicable to Unit 2R and Unit 2S.

D.1.~~10~~**15** Record Keeping Requirements

.....

(d) To document the compliance status with Condition D.1.4(a), the Permittee shall maintain records of the liquid material throughput of Unit 2R and Unit 2S each month and each compliance period.

.....

D.1.18 Reporting Requirements

Quarterly summaries of the information to document the compliance status with Conditions D.1.2(f), D.1.3(b), D.1.3(c) and **D.1.4(a)**, D.1.9 and D.1.10 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, 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 reports submitted by the Permittee 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).

.....

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

Quarterly Report

Source Name: **Tradebe Treatment and Recycling LLC**
Source Address: **4343 Kennedy Avenue, East Chicago, Indiana 46312**
Part 70 Permit No.: **T 089-29424-00345**
Facility: **Unit 2R**
Parameter: **Liquid Material Throughput**
Limit: **The throughput to Unit 2R shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.**

QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ **No deviation occurred in this quarter.**
☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Quarterly Report

Source Name: **Tradebe Treatment and Recycling LLC**
Source Address: **4343 Kennedy Avenue, East Chicago, Indiana 46312**
Part 70 Permit No.: **T 089-29424-00345**
Facility: **Unit 2S**
Parameter: **Liquid Material Throughput**
Limit: **The throughput to Unit 2S shall be less than 41,450,000 gallons of liquid material per twelve (12) consecutive month period, each, with compliance determined at the end of each month.**

QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

☐ **No deviation occurred in this quarter.**
☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

.....

Change 5: The existing emission unit SDS is not subject to 40 CFR Part 63, Subpart DD. Therefore, the permit has been clarified to reflect that this unit is not subject to this rule. However, this rule does still apply to the Hazardous waste material (HWM) tank storage, identified as Unit 1 and Hazardous waste fuel receiving/shipping, Unit 2R and Unit 2S. The requirements of 40 CFR Part 63, Subpart DD have been moved from E.1 to E.7. Also, the requirements of 40 CFR Part 63, Subpart FF have been moved to E.2.

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) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

.....

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V~~, and~~ 40 CFR 61, Subpart FF **and 40 CFR 63, Subpart DD**, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

.....

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF**, 40 CFR 63, Subpart DD** and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

.....

Note: The changes to A.2 were also made in D.1, E.2, E.4 and E.7.

~~E.1.1 General Provisions relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]~~

~~The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 63, Subpart DD.~~

~~E.1.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) - Offsite Waste and Recovery Operations [326 IAC 20-23] [40 CFR Part 63, Subpart DD]~~

~~Pursuant to 40 CFR 63 Subpart DD, the Permittee shall comply with the following provisions of 40 CFR 63 Subpart DD (included as Attachment B of this permit), which are incorporated by reference in 326 IAC 20-23, for the facilities described in this section:~~

~~(1) 40 CFR 63.680~~
~~(2) 40 CFR 63.681~~
~~(3) 40 CFR 63.683~~
~~(4) 40 CFR 63.684~~

~~(5) 40 CFR 63.685~~
~~(6) 40 CFR 63.686~~
~~(7) 40 CFR 63.687~~
~~(8) 40 CFR 63.688~~
~~(9) 40 CFR 63.689~~
~~(10) 40 CFR 63.690~~
~~(11) 40 CFR 63.691~~
~~(12) 40 CFR 63.693~~
~~(13) 40 CFR 63.694~~
~~(14) 40 CFR 63.695~~
~~(15) 40 CFR 63.696~~
~~(16) 40 CFR 63.697~~
~~(17) 40 CFR 63.698~~

~~E.1.3 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 61, Subpart A] [326 IAC 14-1]~~

~~The provisions of 40 CFR 61, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 14-1, apply source-wide except when otherwise specified in 40 CFR 61, Subpart FF.~~

~~E.1.4 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Benzene Waste Operations [40 CFR 61, Subpart FF]~~

~~Pursuant to 40 CFR 61 Subpart FF, the Permittee shall comply with the following provisions of 40 CFR 61 Subpart FF (included as Attachment A of this permit) for the facilities described in this section:~~

~~(1) 40 CFR 61.340;~~
~~(2) 40 CFR 61.341;~~
~~(3) 40 CFR 61.342;~~
~~(4) 40 CFR 61.343;~~
~~(5) 40 CFR 61.345;~~
~~(6) 40 CFR 61.346;~~
~~(7) 40 CFR 61.349;~~
~~(8) 40 CFR 61.350;~~
~~(9) 40 CFR 61.351;~~
~~(10) 40 CFR 61.354(a), (d), (e) and (f);~~
~~(11) 40 CFR 61.355;~~
~~(12) 40 CFR 61.356; and~~
~~(13) 40 CFR 61.357.~~

E.1.1~~5~~ General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 14-1] [40 CFR 61, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 14-1, apply to the source except when otherwise specified in 40 CFR 61, Subpart J.

E.1.2~~6~~ National Emission Standards for Hazardous Air Pollutants (NESHAP) - Equipment Leaks from Fugitive Emission Sources of Benzene [326 IAC 14-7][40 CFR Part 61, Subpart J]

Pursuant to 40 CFR 61 Subpart J, the Permittee shall comply with the following provisions of 40 CFR 61 Subpart J (included as Attachment C of this permit), which are incorporated as 326 IAC 14-7 for the facilities described in this section:

(1) 40 CFR 61.110
(2) 40 CFR 61.246(i)
.....

SECTION E.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control (C1-C6), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control (C7-C8), using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively, collectively using a flare (FL2) as primary VOC control and carbon canisters as backup VOC control (C9).

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters (C10-C11) and one (1) feed hopper using a separate carbon control system (C12).

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

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

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

E.7.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart DD.

E.7.2 Off-Site Waste and Recovery Operations NESHAP [40 CFR 63, Subpart DD] [326 IAC 20-23]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart DD (included as Attachment H to this permit), which are incorporated by reference as 326 IAC 20-23 for the above listed emissions units:

(1) 40 CFR 63.680
(2) 40 CFR 63.681
(3) 40 CFR 63.683
(4) 40 CFR 63.684
(5) 40 CFR 63.685
(6) 40 CFR 63.686
(7) 40 CFR 63.687
(8) 40 CFR 63.688
(9) 40 CFR 63.689
(10) 40 CFR 63.690
(11) 40 CFR 63.691
(12) 40 CFR 63.693
(13) 40 CFR 63.694
(14) 40 CFR 63.695
(15) 40 CFR 63.696
(16) 40 CFR 63.697
(17) 40 CFR 63.698

.....

Change 6: The requirements of 40 CFR 63, Subpart EEEE are being added to the permit.

SECTION E.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected

facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters (C22-C32), and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system (C35), and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

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

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

E.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart EEEE.

E.4.2 Organic Liquids Distribution (Non-Gasoline) NESHAP [40 CFR 63, Subpart EEEE] [326 IAC 20-83]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart EEEE (included as Attachment D to this permit), which are incorporated by reference as 326 IAC 20-83 for tanks 57 through 67 and Unit 2R and Unit 2S:

(1) 40 CFR 63.2330
(2) 40 CFR 63.2334(a)
(3) 40 CFR 63.2338
(4) 40 CFR 63.2342(a) & (d)
(5) 40 CFR 63.2343(b)
(6) 40 CFR 63.2346(a),(b),(c),(d)&(i)
(7) 40 CFR 63.2350
(8) 40 CFR 63.2354
(9) 40 CFR 63.2358
(10) 40 CFR 63.2362
(11) 40 CFR 63.2366
(12) 40 CFR 63.2370
(13) 40 CFR 63.2374
(14) 40 CFR 63.2378
(15) 40 CFR 63.2382
(16) 40 CFR 63.2386
(17) 40 CFR 63.2390
(18) 40 CFR 63.2394
(19) 40 CFR 63.2396
(20) 40 CFR 63.2398

(21) 40 CFR 63.2402
(22) 40 CFR 63.2406
(23) Table 1
(24) Table 2
(25) Table 4
(26) Table 5
(27) Table 6
(28) Table 7
(29) Table 8
(30) Table 10
(31) Table 11
(32) Table 12
.....

Change 7: The requirements of 40 CFR 63, Subpart FFFF are being added to the permit.

SECTION E.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 70 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system (C34), and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

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

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

.

E.6.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-1, for the above listed emissions units, except when otherwise specified in 40 CFR 63, Subpart FFFF.

E.6.2 Miscellaneous Organic Chemical Manufacturing NESHAP [40 CFR 63, Subpart FFFF] [326 IAC 20-84]

The Permittee shall comply with the following provisions of 40 CFR 63 Subpart FFFF (included as Attachment F to this permit), which are incorporated by reference as 326 IAC 20-84 for the Pot Still, Thin Film Evaporator and Distillation Unit:

(1) 40 CFR 63.2430
(2) 40 CFR 63.2435(a),(b),(d) and (e)
(3) 40 CFR 63.2440
(4) 40 CFR 63.2445(a)(2),(c),(d) and (f)
(5) 40 CFR 63.2450(a),(b),(c),(e),(g),(h),(l),(m) and (p)
(6) 40 CFR 63.2455(a) and (b)
(7) 40 CFR 63.2465
(8) 40 CFR 63.2470
(9) 40 CFR 63.2475
(10) 40 CFR 63.2480(a) and (b)
(11) 40 CFR 63.2505
(12) 40 CFR 63.2515
(13) 40 CFR 63.2520
(14) 40 CFR 63.2525(a)-(f)
(15) 40 CFR 63.2540
(16) 40 CFR 63.2545
(17) 40 CFR 63.2550
(18) Table 1
(19) Table 3
(20) Table 4
(21) Table 5
(22) Table 6
(23) Table 8
(24) Table 9
(25) Table 11
(26) Table 12

.....

Change 8: The existing ATDU includes a natural gas fired heater. This heater is a 15.6 MMBtu/hr unit instead of 10 MMBtu/hr, as listed in the permit.

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:

.....

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

.....

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) ~~10~~**15.6** MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

.....

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

.....

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

.....

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) ~~10~~**15.6** MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

.....

.....

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

.....

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

.....

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) ~~10~~**15.6** MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

.....

.....

Change 9: For the emission calculations, the existing ATDU previously showed a VOC PTE of 14.8 ton/yr. This value is incorrect; the only emissions for this unit are from combustion.

Change 10: Control device ID's have been added to the permit. Also, applicable NSPS/NESHAPs have been included in the description for each emission unit.

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) Hazardous waste material (HWM) tank storage, identified as Unit 1, described as follows:

(1) HWM mix, blend, and storage tanks, identified as 1R, 4, 18, 19, 20, 21, 22, and 23, with nominal gallon capacities of 12,600, 12,690, 20,353, 20,353, 19,688, 20,353, 20,353, and 20,353, respectively, constructed in 2008, 1970, 1993, 1993, 1993, 1993, 1993, and 1993, respectively, collectively using three (3) sets of carbon adsorbers with the sets used alternately, each set with two (2) carbon canisters in series for VOC control **(C1-C6)**, using a closed-loop vapor exchange system to minimize air emissions, and exhausting to one stack, identified as HWM Storage/Blending Stack.

(2) HWF receiving, blending and storage tank, identified as 29, with a capacity of 21,000 gallons, constructed in 2000, using one (1) carbon adsorber unit consisting of two (2) carbon canisters in series for VOC control **(C7-C8)**, using a closed-loop vapor exchange system to minimize air emissions, and exhausting to stack TK 29.

(3) HWF blending and mixing tanks, identified as 6 and 7, with gallon capacities of 4,386 and 2,900, respectively, constructed in 1989 and 1952, respectively,

collectively using a flare **(FL2)** as primary VOC control and carbon canisters as backup VOC control **(C9)**.

(4) One (1) hydropulper tank, identified as Tank 24 HP, constructed in 1993, with a capacity of 3,500 gallons using one (1) carbon adsorber unit consisting of two (2) carbon canisters **(C10-C11)** and one (1) feed hopper using a separate carbon control system **(C12)**.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart DD, this unit is considered an affected facility.

(b) Hazardous waste fuel (HWF), hazardous waste for tolling and organic liquid product receiving and shipping operations located at Area 2, Area 8 and the Rail line, including organic product receiving/shipping, identified as Unit 2R, with a maximum capacity of 17,200 gallons of liquid material per hour, and Unit 2S, with a maximum capacity of 13,200 gallons of liquid material per hour, constructed in 1991, and consisting of the following operations:

(1) Loading and unloading of railcars, occurring outdoors and unenclosed, and using submerged filling;

(2) Loading and unloading of tank trucks, occurring semi-enclosed in a three-sided shed, and at separate unenclosed areas, and using bottom filling; and

(3) Unloading of various sizes of drums and totes.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF, 40 CFR 63, Subpart DD and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(c) One (1) materials manual lab packing, depacking, and bulking operation, identified as Unit 4, with a maximum capacity of 27,375 pack containers per year, constructed in 1992, including three insignificant booths located in Area 5 in addition to the following equipment:

(1) One (1) booth for manual lab packing, depacking and bulking of organic materials, identified as Lab Pack Booth 1, using a single carbon canister for VOC control **(C13)**, and exhausting to stack LP S1.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system **(C14)** for VOC control, exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control **(C15)**, exhausting to SDS 03.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control **(C16)**, exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control **(C17)**, exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare **(FL1)** with a demister (and a carbon adsorption system as backup **(C18)**) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control **(BH1-BH2)**, exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system **(C19)**, and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system **(C20)**, and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system **(C21)**, and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(h) Five (5) product tanks, identified as Tanks 57 through 61, constructed in 1998, with nominal capacities of 20,000 gallons, 20,000 gallons, 6,000 gallons, 6,000 gallons and 20,000 gallons, respectively, each controlled by a carbon adsorption system containing two (2) carbon canisters **(C22-C32)**, and exhausting to stacks LDS 09a-09e.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart EEEE, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 **and modified in 2015**, with a maximum throughput rate of ~~70~~ **115** gallons of liquid waste per hour, controlled by a carbon adsorption system **(C33)**, and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(j) One (1) Thin Film Evaporator, constructed in 2008, with a 2.4 million Btu/hr natural gas fired burner and a maximum throughput rate of 390 gallons of liquid waste per hour, controlled by a carbon adsorption system **(C34)**, and exhausting to stack S11.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(k) Six (6) product tanks located in Area 1, identified as Tanks 62 through 67, permitted in 2008 with nominal capacities of 12,000 gallons per tank, controlled by a carbon adsorption system **(C35)**, and exhausted to stacks S12-S17, respectively. Also included is a molecular sieve, installed in 2010.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(l) One (1) degassing operation, constructed in 2008 and approved in 2014 for modification, with a maximum degassing rate of 405.8 tons of gasses per year. The degassing operation includes a reactor tank into which gasses are vented and a pressurized "shock" tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare **(FL3)** or carbon canisters **(C36)**.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

…….

These changes were also made to emission unit descriptions in Sections D.1 and E.1.

Change 11: The emissions calculations list a 2.5 MMBtu/hr hot oil heater; however this unit is not listed in the permit. This heater is added to the Insignificant Activities section of the permit.

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

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

……

(d) One (1) hot oil heater, capacity of 2.5 MMBtu/hr.

……

Change 12: A diesel-fired emergency generator has been added to the permit 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:

……

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

……

SECTION E.8 FACILITY OPERATION CONDITIONS

Facility Description:

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

E.8.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart 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 above listed emission unit, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

E.8.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart IIII]

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

(1) 40 CFR 60.4200(a)(2)
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4209(a)
(6) 40 CFR 60.4211(a), (c) & (f)
(7) 40 CFR 60.4214(b)
(8) 40 CFR 60.4218
(9) 40 CFR 60.4219
(10) Table 8

SECTION E.9 FACILITY OPERATION CONDITIONS

Facility Description:

(n) One (1) diesel-fired emergency generator, approved in 2015 for construction, with a maximum capacity of 896 horsepower, exhausting to stack G.

Under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(b)(1)(i)
(4) 40 CFR 63.6605(b)
(5) 40 CFR 63.6640(f)
(6) 40 CFR 63.6645(f)
(7) 40 CFR 63.6665
(8) 40 CFR 63.6670
(9) 40 CFR 63.6675

……

Change 12: Tradebe wishes to increase the capacity of the existing Pot Still from 70 gallons per hour to 115 gallons per hour. PTE calculations (TSD App. A) have been updated to show the revised capacity.

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

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

……

(i) One (1) Pot Still, constructed in 2007 **and modified in 2015**, with a maximum throughput rate of ~~70~~**115** gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

……

Note: This change was also made in D.1, E.1, E.2 and E.6.

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. 089-34432-00345 and Significant Permit Modification No. 089-34503-00345. The staff recommend to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Heath Hartley 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) 232-8217 or toll free at 1-800-451-6027 extension 2-8217.

(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
Emissions Summary Sheet

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Before 2015 Modification

Uncontrolled PTE (TPY)											
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**	**Highest Single HAP**	
HWM Storage	0	0	0	0	0	8.9	0	0	8.9	8.9	Toluene
HWF Ship	0	0	0	0	0	59.3	0	0	59.3	59.3	Toluene
Unit 24	0	0	0	0	0	2.2	0	0	2.2	2.2	Toluene
Lab Pack	0.6	0.6	0.6	0	0	2.5	0	0	2.5	2.5	Toluene
Degassing	0	0	0	0	0	17.0	0	0	0.3	0.3	Toluene
SDS Shredder	0	0	0	0	0	2.6	0	0	2.6	2.6	Toluene
SDS Shaker and conveyor	77.7	77.7	77.7	0	0	0.0	0	0	0	0	
SDS-ATDU	0	0	0	0	0	14.8	0	0	14.8	14.8	Toluene
SDS-ATDU from NG	0.1	0.5	0.5	0.04	6.8	0.4	5.7	8,248	0.1	0.1	Hexane
Distillation	0	0	0	0	0	2.3	0	0	2.3	2.3	HCl
Tanks 52-55	0	0	0	0	0	0.5	0	0	0.5	0.5	Toluene
Tanks 57-67	0	0	0	0	0	1.9	0	0	1.9	1.9	Toluene
Pot Still	0	0	0	0	0	0.5	0	0	0.5	0.5	Toluene
Thin Film Evap	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,269	0.02	0.02	Toluene
Heater	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,322	0.02	0.02	Toluene
Fugitive	1.9	0.4	0.4	0	0	0	0	0	0	0	
Source Total	**80.4**	**79.4**	**79.4**	**0.05**	**9.0**	**113.0**	**7.5**	**10,839**	**95.9**	**93.0**	**Toluene**

Limited PTE (TPY)											
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**	**Highest Single HAP**	
HWM Storage	0	0	0	0	0	8.9	0	0	8.9	8.9	Toluene
HWF Ship	0	0	0	0	0	59.3	0	0	59.3	59.3	Toluene
Unit 24	0	0	0	0	0	2.2	0	0	2.2	2.2	Toluene
Lab Pack	0.6	0.6	0.6	0	0	2.5	0	0	2.5	2.5	Toluene
Degassing	0	0	0	0	0	17.0	0	0	0.3	0.3	Toluene
SDS Shredder	0	0	0	0	0	0.12	0	0	2.6	2.6	Toluene
SDS Shaker and conveyor	77.7	77.7	77.7	0	0	0.7	0	0	0	0	
SDS-ATDU	0	0	0	0	0		0	0	14.8	14.8	Toluene
SDS-ATDU from NG	0.1	0.5	0.5	0.04	6.8		5.7	8,248	0.1	0.1	Hexane
Distillation	0	0	0	0	0	0.06	0	0	2.3	2.3	HCl
Tanks 52-55	0	0	0	0	0	0.5	0	0	0.5	0.5	Toluene
Tanks 57-67	0	0	0	0	0	1.9	0	0	1.9	1.9	Toluene
Pot Still	0	0	0	0	0	0.5	0	0	0.5	0.5	Toluene
Thin Film Evap	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,269	0.02	0.02	Toluene
Heater	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,322	0.02	0.02	Toluene
Fugitive	1.9	0.4	0.4	0	0	0	0	0	0	0	
Source Total	**80.4**	**79.4**	**79.4**	**0.05**	**9.0**	**93.8**	**7.5**	**10,839**	**95.9**	**93.0**	**Toluene**

Appendix A: Emissions Calculations
Emissions Summary Sheet

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

After 2015 Modification

Uncontrolled PTE (TPY)											
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**	**Highest Single HAP**	
HWM Storage	0	0	0	0	0	8.9	0	0	8.9	8.9	Toluene
Unit 2R	0	0	0	0	0	77.3	0	0	77.3	77.3	Toluene
Unit 2S	0	0	0	0	0	59.3	0	0	59.3	59.3	Toluene
Unit 24	0	0	0	0	0	2.2	0	0	2.2	2.2	Toluene
Lab Pack	0.6	0.6	0.6	0	0	2.5	0	0	2.5	2.5	Toluene
Degassing	0	0	0	0	0	17.0	0	0	0.3	0.3	Toluene
SDS Shredder	0	0	0	0	0	2.6	0	0	2.6	2.6	Toluene
SDS Shaker and conveyor	77.7	77.7	77.7	0	0	0.0	0	0	0	0	
SDS-ATDU from NG	0.1	0.5	0.5	0.04	6.8	0.4	5.7	8,248	0.13	0.12	Toluene
SDS-VRU	0	0	0	0	0	2,328	809.2	14,706	904.3	904.3	Hexane
Flare FL1 (from VRU)	0	0	0	8	5	10.8	28.5	1,505	13.4	12.6	HCl
Distillation	0	0	0	0	0	2.3	0	0	2.3	2.3	Toluene
Tanks 52-55	0	0	0	0	0	0.5	0	0	0.5	0.5	Toluene
Tanks 57-67	0	0	0	0	0	1.9	0	0	1.9	1.9	Toluene
Pot Still (modified in 2015)*											
Thin Film Evap	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,269	0.02	0.02	Toluene
Heater	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,322	0.02	0.02	Toluene
Fugitive	1.9	0.4	0.4	0	0	0	0	0	0	0	
Existing Total	**80.4**	**79.4**	**79.4**	**8.1**	**14.2**	**2,514**	**845.2**	**27,050**	**1,075.7**	**904.3**	**Hexane**
2003 Modification Total	**77.8**	**78.2**	**78.2**	**8.1**	**12.1**	**2,345**	**843.4**	**24,459**	**923.3**	**904.3**	**Hexane**
2015 Modification											
SDS Shredder II	0	0	0	0	0	7.1	0	0	7.1	7.08	Tetrachloroethylene
SDS-ATDU II	0.3	1.0	1.0	0.1	13.7	0.8	11.5	16,587	0.3	0.25	Hexane
SDS VRU II	0	0	0	0	0	4,656	1,618	29,411	1,809	1,809	Hexane
Flare FL1 *(from VRU II)*	0	0	0	16.2	10.5	21.6	57.0	3,010	14.0	13.1	HCl
Solids Handling (SHS)	330.4	330.4	330.4	0	0	0.7	0	0	0	0	Toluene
Tank 81-87	0	0	0	0	0	1.3	0	0	1.3	1.3	Toluene
F-01 & F-02	0	0	0	0	0	0.1	0	0	0.1	0.1	Toluene
Cooling Tower	0.7	0.2	0.0	0	0	0	0	0	0	0	
Pot Still (modified in 2014)*	0	0	0	0	0	4.2	0	0	4.17	4.17	Toluene
Emergency Generator	0.2	0.1	0.1	0.9	5.4	0.2	1.2	261	2.5E-03	1.2E-03	Benzene
2015 Modification Total	**331.5**	**331.7**	**331.5**	**17.2**	**29.6**	**4,692**	**1,688**	**49,270**	**1,836**	**1,809**	**Hexane**
Source Total	**411.9**	**411.1**	**410.9**	**25.3**	**43.8**	**7,206**	**2,533**	**76,320**	**2,911**	**2,713**	**Hexane**

Limited PTE (TPY)											
Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**	**Highest Single HAP**	
HWM Storage	0	0	0	0	0	8.9	0	0	8.9	8.9	Toluene
Unit 2R	0	0	0	0	0	21.3	0	0	21.3	21.3	Toluene
Unit 2S	0	0	0	0	0	21.3	0	0	21.3	21.3	Toluene
Unit 24	0	0	0	0	0	2.2	0	0	2.2	2.2	Toluene
Lab Pack	0.6	0.6	0.6	0	0	2.5	0	0	2.5	2.5	Toluene
Degassing	0	0	0	0	0	17.0	0	0	0.28	0.28	Toluene
SDS Shredder	0	0	0	0	0	0.1	0	0	2.6	2.6	Toluene
SDS Shaker and conveyor	77.7	77.7	77.7	0	0	0.7	0	0	0	0	
SDS-ATDU from NG	0.1	0.5	0.5	0.04	6.8		5.7	8,248	0.13	0.12	Hexane
SDS-VRU	0	0	0	0	0	Less Than	8.6	14,706	904.3	904.3	Hexane
Flare FL1 (from VRU)	0	0	0	8.1	5.2	23.4	28.5	1,505	13.4	12.6	Toluene
Distillation	0	0	0	0	0	0.06	0	0	2.3	2.3	Toluene
Tanks 52-55	0	0	0	0	0	0.5	0	0	0.5	0.5	Toluene
Tanks 57-67	0	0	0	0	0	1.9	0	0	1.9	1.9	Toluene
Pot Still (modified in 2015)*											
Thin Film Evap	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,269	0.02	0.02	Toluene
Heater	0.02	0.1	0.1	0.01	1.1	0.1	0.9	1,322	0.02	0.02	Toluene
Fugitive	1.9	0.4	0.4	0	0	0	0	0	0	0	
Existing Total	**80.4**	**79.4**	**79.4**	**8.1**	**14.2**	**Less Than 99.92**	**44.7**	**27,050**	**981.6**	**904.4**	**Hexane**
2003 Modification Total	**77.8**	**78.2**	**78.2**	**8.1**	**12.1**	**Less Than 24.9**	**42.9**	**24,459**	**923.3**	**904.4**	**Hexane**
2015 Modification											
SDS Shredder II	0	0	0	0	0		0	0	7.1	7.1	Toluene
SDS-ATDU II	0.3	1.0	1.0	0.1	13.7		11.5	16,587	0.3	0.2	Hexane
SDS VRU II	0	0	0	0	0	*Less	17.6	29,411	1,809	1,809	Hexane
Flare FL1 *(from VRU II)*	0	0	0	16.2	10.5	Than	57.0	3,010	14.0	13.1	HCl
Solids Handling (SHS)	82.8	82.8	82.8	0	0	95.6	0	0	0	0	Toluene
Tanks 81-87	0	0	0	0	0		0	0	1.3	1.3	Toluene
F-01 & F-02	0	0	0	0	0		0	0	0.1	0.1	Toluene
Cooling Tower	0.7	0	0	0	0	0	0	0	0	0	
Pot Still (modified in 2015)*	0	0	0	0	0	4.2	0	0	4.17	4.17	Toluene
Emergency Generator	0.2	0.1	0.1	0.9	5.4	0.2	1.2	261	2.5E-03	1.2E-03	Benzene
2015 Modification Total	**83.9**	**84.1**	**83.9**	**17.2**	**29.6**	**Less Than 99.9**	**87.4**	**49,270**	**1,836**	**1,809**	**Hexane**
Source Total	**164.3**	**163.5**	**163.3**	**25.3**	**43.8**	**Less Than 199.9**	**132.0**	**76,320**	**2,817**	**2,713**	**Hexane**

*The existing pot still is being modified and therefore is included as part of this 2015 modification.

Appendix A: Emission Calculations
SDS Shredder II

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

The SDS Shredder II is similar to the existing SDS Shredder. Therefore,
VOC concentration is assumed to be equal to VOC concentration tested from the shredder exhaust for SDS.
SDS Shredder stack test (6/4/09) resulted in VOC emission rate of:

11.4	ppmv as propane (C3H8)
0.0002	lb/hr as C2Cl4

SDS II design air flow rate from the shredder exhaust will be:

70	scfm

Controlled VOC/HAPs potential to emit

0.032	lb/hr as C2Cl4
0.14	tons/yr

Uncontrolled VOC/HAPs PTE (assuming a carbon control efficiency of 98%) =

1.62	lb/hr as C2Cl4
7.08	tons/yr

Methodology

Controlled PTE = flow rate (scfm) * 60 min/hr * emission rate (ppmv) /1000000 cf exhaust * (0.1196 lb propane/cf propane) * (497.49 lb C2Cl4/88.18 lb C3H8) =

Uncontrolled PTE (ton/yr) = Controlled PTE (ton/yr) / (1 - Control Efficiency (%))

Appendix A: Emission Calculations
ATDU Burner

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

MMBtu/hr	mmBtu/mmscf	MMCF/yr
32.0	1020	274.8

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.26	1.04	1.04	0.08	13.7	0.76	11.5

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	HAPs - Organics					
	Benzene	Dichlorobenze	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.886E-04	1.649E-04	1.031E-02	2.473E-01	4.672E-04	**2.586E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.871E-05	1.512E-04	1.924E-04	5.222E-05	2.886E-04	**7.530E-04**
					Total HAPs	**2.593E-01**
					Worst HAP	**2.473E-01**

Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	16,489	3.16E-01	3.02E-01
Summed Potential Emissions in tons/yr	16,490		
CO2e Total in tons/yr	16,587		

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
Solids Handling System

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Total VOC* (ug/m3)	VOC/HAPs PTE (lb/hr)	VOC/HAPs PTE (ton/yr)
9365	0.154	0.7

*Based on results of similar unit (SDS 04)

Unit	Maximum Air Flow (acfm)	Design Outlet Grain Loading (gr/scf)	Overall Control Efficiency	PTE of PM/PM10/PM2.5 After Control (lbs/hr)	PTE of PM/PM10/PM2.5 After Control (ton/yr)	PTE of PM/PM10/PM2.5 Before Control (lbs/hr)	PTE of PM/PM10/PM2.5 Before Control (ton/yr)	Limited PM/PM10/PM2.5 Emissions (lb/hr)	Limited PM/PM10/PM2.5 Emissions (ton/yr)	Equivalent Limited Control Efficiency
SDS 04	4400	0.04	98%	1.51	6.6	75.43	330.4	18.90	82.8	74.9%

Assume PM=PM10=PM2.5

Methodology

VOC/HAPs PTE (ton/yr) = VOC (ug/m3) x 1 g / 1000000 ug x 0.0283 m^3 / ft^3 x 1 lb / 453.6 g x air flow (acfm) x 60 min/1 hour x 1 ton/2000 lb x 8760 hrs/yr
PTE of PM/PM10/PM2.5 After Control (ton/yr) = air flow (acfm) x grain loading (gr/scf) x 1 lb / 7000 gr x 60 min/1 hour x 1 ton/2000 lb x 8760 hrs/yr
PTE of PM/PM10/PM2.5 Before Control = PTE of PM/PM10/PM2.5 After Control x (1 - control efficiency)
Equivalent Limited Control Efficiency = 1 - [Limited PM/PM10/PM2.5 Emissions (lb/hr) / PTE of PM/PM10/PM2.5 Before Control (lbs/hr)]

Appendix A: Emission Calculations
Vapor Recovery Unit - VRU II

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Emission factors for SDS II VRU based on testing performed on existing SDS VRU, designed in the Tradebe Title V permit as SDS 07

Air Flow Rate to Flare for SDS 07

Max Air Flow 384.92 scfm (saturated) 5% percent moisture
Dry air flow 365.674

Operating Level During Test for SDS 07
Average process rate during sampling = 2.19 tons per hour

Constituent	Sample 1	Sample 2	Sample 3	Sample 4	Average	CFM	Density (lb/cf)	Uncontrolled PTE (lb/hr)	Uncontrolled VOC (lb/hr)	
H2	9.16	10.95	3.73	6.39	7.56	27.64	NA	NA		
CO	10.78	10.51	7.82	10.76	9.97	36.45	0.074	161.83		
N2	36.6	44.1	55.4	44.1	45.05	164.74	NA	NA		
O2	0.76	0.75	0.64	0.76	0.73	2.66	NA	NA		
H2S	<0.03	<0.03	0.288	<0.03	0.07	0.26	0.0911	1.44		
CO2	5.45	5.81	5.04	6.85	5.79	21.16	0.117	148.57		
CH4	16.26	12.15	8.33	11.29	12.01	43.91	0.0424	111.70		
Acetylene	0.01	<0.01	0.03	0.01	0.01	0.05	0.0697	0.19	0.19	
Ethylene	6.06	4.07	5.35	6.22	5.43	19.84	0.0746	88.79	88.79	
Ethane	3.63	2.39	2.65	2.83	2.88	10.51	NA	NA		
Propane	0.611	0.524	0.628	0.472	0.56	2.04	0.1196	14.66	14.66	
Propylene	5.06	3.51	3.24	3.89	3.93	14.35	0.111	95.59	95.59	
Other C4s	0.011	<0.01	0.122	<0.01	0.03	0.12	0.1582	1.15	1.15	
i-Butane	0.021	0.036	0.033	0.061	0.04	0.14	0.1582	1.31	1.31	
n-Butane	0.052	0.06	0.101	0.04	0.06	0.23	0.1582	2.20	2.20	
Butenes	1.51	1	1.29	2.03	1.46	5.33	0.148	47.33	47.33	
Other C5s	0.28	0.231	0.277	0.345	0.28	1.04	0.1904	11.83	11.83	
Neo Pentane	0.114	0.103	0.115	0.116	0.11	0.41	0.1904	4.68	4.68	
i-Pentane	0.004	0.006	0.004	0.004	0.00	0.02	0.1904	0.19	0.19	
n-Pentane	0.088	0.053	0.097	0.094	0.08	0.30	0.1904	3.47	3.47	
1-Pentene	0.111	0.112	0.229	0.128	0.15	0.53	0.1852	5.89	5.89	
Other C6s	0.136	0.119	0.166	0.179	0.15	0.55	0.2274	7.48	7.48	
Hexane +	3.26	3.47	4.38	3.39	3.63	13.26	0.2274	180.86	180.86	(assumed to be HAPs)
Gross HV (dry) (BTU/cf)	761	622	643	688	678.50					
Gross HV (sat) (BTU/cf)	748	611	632	676	666.75					
	99.968	99.954	99.96	99.959	99.9603	365.529			465.63	

Constituents Contained in Exhaust Stream to Flare Based on SDS VRU Sampling Performed December 2013
1. A total of four samples were collected and analyzed for gaseous constituents. The table below summarizes each of the four samples in percent by volume on a dry basis.
2. An average value for each gaseous constituent was computed. This was then used to determine the cubic feet per hour of each gas by multiplying the avg % by volume by the dry air flow rate in cfh.
3. The mass emission rate of each constituent was computed by multiplying the cubic feet per hour air flow rate by the vapor density of the constitutient.

4. Materials classified as volatile organic compounds (VOCs) were totaled to determine total VOC emissions.
5. Uncontrolled emission rates during sampling and emission factors for regulated air pollutants are summarized below:

Nitrogen Oxides:
AP-42 emission factor (Table 13.5-1) expressed as 0.068 lb/mmBtu
15.40 mmBtu/hr heat input (using average Gross HV (saturated) and the saturated air flow rate)
1.05 lb/hr (controlled and uncontrolled)
0.48 lb/ton (controlled and uncontrolled)

Carbon Monoxide:
161.83 pounds per hour (based on uncontrolled emissions from flare gas analysis above)
73.90 pounds per ton processed (uncontrolled based on gas analysis)
AP-42 emission factor (table 13.5-1) expressed as 0.37 lb/mmBtu
5.70 lb/hr (controlled using AP-42 emission factor)
2.60 lb/ton (controlled using AP-42 emission factor)

VOC:
465.63 pounds per hour
212.61 pounds per ton processed
AP-42 emission factor (Table 13.5-1) expressed as 0.14 lb/mmBtu)
2.16 lb/hr (controlled using AP-42 emission factor)
0.98 lb/ton (controlled using AP-42 emission factor)

HAPs
the Hexane+ category is assumed to be 100% organic HAPs
180.86 pounds per hour
82.58 pounds per ton processed
Control efficiency for HAPs assumed equal to destruction efficiency for VOC
0.84 lb/hr (controlled)
0.38 lb/ton (controlled)

CO2
148.57 pounds per hour (controlled and uncontrolled based on emissions from flare gas analysis above)
67.84 pounds per ton processed (controlled and uncontrolled)

CH4
111.70 pounds per hour (uncontrolled based on uncontrolled emissions from flare gas analysis above)
51.01 pounds per ton processed (uncontrolled based on gas analysis)
Control efficiency for CH4 assumed equal to destruction efficiency for VOC
0.52 pounds per hour (controlled)
0.24 pounds per ton (controlled)

CO2e
Global Warming Potential (GWP) for methane = 25
2941.14 pounds per hour (uncontrolled)
1342.98 pounds per ton processed (uncontrolled)
161.50 pounds per hour (controlled)
73.74 pounds per ton (controlled)

SO2
560.67 mg/m^3 sulfur based on average of three samples collected
1.62 lb/hr SO2 during sampling (controlled and uncontrolled)
0.74 lb SO2 produced per ton of waste processed (controlled and uncontrolled)

HCl
1705 mg/m^3 Cl based on one sample collected
2.53 lb/hr HCl emissions
1.15 pounds per ton (controlled and uncontrolled)
0.6 lb HCl produced per ton of Waste processed (based on analysis for existing SDS unit and anticipated chlorine content of materials processed)

HF
105 mg/m^3 F based on one sample collected
0.16 lb/hr HF emissions
0.07 lb/ton (controlled and uncontrolled)
0.038 lb HF produced per ton of waste processed (based on analysis for existing SDS unit and anticipated fluorine content of materials processed

Appendix A: Emission Calculations
Vapor Recovery Unit - VRU II

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

5	Maximum Throughput (tons of SDS II vapor product/hr)
23827	Limited Throughput (tons of SDS II vapor product/year)
1.48	CO Limit (lb/ton SDS II vapor product processed)

Emissions from VRU II

Pollutant	Uncontrolled Emission Factor (lb/ton SDS II vapor product processed)	Uncontrolled PTE (lb/hr)	Uncontrolled PTE (ton/yr)	Control Efficiency	Controlled Emissions (lb/hr)	Controlled and Limited Emissions (ton/yr)*	Overall Emission Reduction
VOCs	212.6	1063.1	4656.3	98%	21.3	50.7	98.91%
CO	73.9	369.5	1618.3	98%	7.4	17.6	98.91%
Hexane	82.6	412.9	1808.6	98%	8.3	19.7	98.91%
CO2	67.8	339.2	1485.7	0%	339.2	808.2	45.60%
CH4	51.0	255.0	1117.0	98%	5.1	12.2	98.91%
CO2e	1343.0	6714.9	29411.4		NA	NA	

*Emissions limit in order to keep the 2014 Modification to a minor modification for 326 IAC 2-3 (Emission Offset) and 326 IAC 2-2 (PSD).

Emissions created by flare

Pollutant	Emission Factor (lb/ton)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)
NOx	0.48	2.4	10.5
VOCs	0.98	4.9	21.6
CO	2.60	13.0	57.0
SO2	0.74	3.7	16.2
HCl	0.60	3.0	13.1
HF	0.04	0.2	0.8

Pollutant	Captured CH4 Emissions (lb/ton)	PTE (tons/yr)	GWP	Emissions (ton/yr CO2e)
CO2	51	3,010	1	3,010

Methodology
Uncontrolled PTE (ton/yr) = Emission factor (lb/ton) x Max Throughput (ton/hr) x 8760 hr/yr
Controlled PTE (ton/yr) = Unontrolled PTE (ton/yr) x (1 - Control Eff.)
Limited PTE (ton/yr) = Emission factor (lb/ton) x Limited Throughput (ton/yr) x 1 ton/2000 lb
Limited and Controlled PTE (ton/yr) = Limited PTE (ton/yr) x (1 - Control Eff.)

Appendix A: Emission Calculations
Vapor Recovery Unit - VRU

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

2.5	Maximum Throughput (tons of SDS vapor product/hr)
11686	Limited Throughput (tons of SDS vapor product/year)
1.48	CO Limit (lb/ton SDS vapor product processed)

Emissions from VRU

Pollutant	Uncontrolled Emission Factor (lb/ton SDS vapor product processed)	Uncontrolled PTE (lb/hr)	Uncontrolled PTE (ton/yr)	Control Efficiency	Controlled Emissions (lb/hr)	Controlled and Limited Emissions (ton/yr)	Overall Emission Reduction
VOC	212.6	531.5	2328.1	98%	10.6	24.8	98.93%
CO	73.9	184.7	809.2	98%	3.7	8.6	98.93%
HAPs	82.6	206.5	904.3	98%	4.1	9.7	98.93%
CO2	67.8	169.6	742.8	0%	169.6	396.4	46.64%
CH4	51.0	127.5	558.5	98%	2.6	6.0	98.93%
CO2e	1343.0	3357.5	14705.7		NA	7847.1	

Emissions created by flare

Pollutant	Emission Factor (lb/ton)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)
NOx	0.48	1.2	5.2
VOC	0.98	2.5	10.8
CO	2.60	6.5	28.5
SO2	0.74	1.8	8.1
HCl	1.15	2.9	12.6
HF	0.07	0.2	0.8

Pollutant	Captured CH4 Emissions (lb/ton)	PTE (tons/yr)	GWP	Emissions (ton/yr CO2e)
CO2	51	1,505	1	1,505

Methodology
Uncontrolled PTE (ton/yr) = Emission factor (lb/ton) x Max Throughput (ton/hr) x 8760 hr/yr
Controlled PTE (ton/yr) = Unontrolled PTE (ton/yr) x (1 - Control Eff.)
Limited PTE (ton/yr) = Emission factor (lb/ton) x Limited Throughput (ton/yr) x 1 ton/2000 lb
Limited and Controlled PTE (ton/yr) = Limited PTE (ton/yr) x (1 - Control Eff.)

Appendix A: Emission Calculations
Tank VOC Emissions

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

P&ID Item description		Tank 81	Tank 82	Tank 83	Tank 84	Tank 85	Tank 87	Tank 86	F-02	F-01		
		Oil/Solvent Product Storage	Oil/Solvent Product Storage	Oil/Solvent Product Storage	Oil/Solvent Product Storage	Process Water	Oil/Solvent Storage	Process Water/Light Sludge Waste Storage	VRU Interceptor	Oil Water Separator		
Stack ID		SDS II 08	SDS II 08	SDS II 08	SDS II 08	SDS II 07	SDS II 06	SDS II 06	SDS II 03	SDS II 03		
Tank/Vessel nominal Capacity	**Gal**	12000	12000	12000	12000	22000	22000	22000	3700	22000		
Type		Vertical, cylindrical, cone bottom	Vertical, cylindrical, cone bottom	Vertical, cylindrical, cone bottom	Vertical, cylindrical, cone bottom	Vertical, cylindrical, cone bottom	Vertical, cylindrical, cone bottom	Vertical, cylindrical, cone bottom	Fabricated, flat sided process vessel	Fabricated, flat sided process vessel		
Height	**Inches**	300	300	300	300	380	380	380	75 approx	110 approx		
Diameter	**Inches**	120	120	120	120	138	138	138	N/A	N/A		
Length	**Inches**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	180 average	450 average		
Width	**Inches**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	63 average	105 average		
Anticipated throughput:												
US gallons/day		1000	1000	1000	1000	3500	2000	3500				
Level		Variable	Variable	Variable	Variable	Variable	Variable	Variable	Fixed ~85%	Fixed ~90%		
Tank material		Carbon Steel	Carbon Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel		
Tank color		White	White	Self Colour	Self Colour	Self Colour	Self Colour	Self Colour	Self Colour	Self Colour		
Venting to carbon		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Turnovers per year		30.4	30.4	30.4	30.4	58.1	33.2	58.1	24.0	24.0		
Roof Type (Cone/Dome)		Cone	Cone	Cone	Cone	Cone	Cone	Cone	Cone	Cone		
Height (feet)		2	2	2	2	2	2	2	2	2		
Roof Slope		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Breather Vent Settings (psig)	Vacuum	-0.045	-0.045	-0.045	-0.045	-0.045	-0.045	-0.045	-0.03	-0.03		
Breather Vent Settings (psig)	Pressure	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.03	0.03		
Site Selection		Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL		
Tank Contents		Toluene	Toluene	Toluene	Toluene	40% toluene	Toluene	40% toluene	50% Toluene	50% Toluene		
Working Losses (lbs)		211.33	211.33	211.47	211.47	462.63	433.85	518.53	37.70	219.91		
Breathing Losses (lbs)		9.54	9.54	9.54	9.54	20.65	24.59	24.59	5.54	16.93		
Total VOC Emissions (lbs)		220.87	220.87	221.01	221.01	483.28	458.44	543.12	43.24	236.84		
Total VOC Emissions (tpy) - Maximum Uncontrolled		0.110	0.110	0.111	0.111	0.242	0.229	0.272	0.022	0.118	**1.32**	**Total 81-87**
VOC Control Efficiency		98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%		
Total VOC Emissions (tpy) - Maximum Controlled		0.0022	0.0022	0.0022	0.0022	0.0048	0.0046	0.0054	0.0004	0.0024	**0.02**	**Total 81-87 (controlled)**

Emissions calculated from EPA TANKS data

Appendix A: Emission Calculations
Cooling Tower

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Stack ID **Insignficant**
Source Name **Cooling Tower**

Operating Parameters			Note
Water Circulation Rate of all cells (R)	1,200	gpm	
Total Liquid Drift (S)	0.005	%	
Density of Water (D)	8.3453	lb/gal	
Expected TDS/TSS of Circulated Water (C)	5000	ppmw	
Operating Time:	24	(hr/day)	
	8760	(hr/year)	

Pollutant	Emission Factor	Unit	Emission Rate (lb/hr)	Emission Rate (tpy)	Note
PM	2.09E-03	lb/10^3 gal	0.15	0.66	1
PM10	29.97	% of PM	0.05	0.20	2
PM2.5	0.18	% of PM	2.65E-04	1.16E-03	2

Notes:
(1) USEPA AP-42, Chapter 13.4 *Wet Cooling Towers*, Table 13.4-1 [EF (lb/1000 gal) = 1,000*D*(S/100)*(C/1,000,000)]
(2) Calculating Realistic PM10 Emissions from Cooling Towers, Joel Reisman and Gordon Frisbie, Environmental Progress (Vol 21, No 2), July 2002

Max TDS = 5,000 ppmw

EPRI Droplet Diameter (µm)	Droplet Volume (μm^3)	Droplet Mass (µg)	Particle Mass (solids) (µg)	Solid Particle Volumne (μm^3)	Solid Particle Diameter (µm)	EPRI % Mass Smaller	
10	524	5.24E-04	2.62E-06	1.19	1.315	0.000	
				Interpolation --->	2.500	0.177	**0.177 % of PM is PM2.5**
20	4189	4.19E-03	2.09E-05	9.52	2.630	0.196	
30	14137	1.41E-02	7.07E-05	32.13	3.944	0.226	
40	33510	3.35E-02	1.68E-04	76.16	5.259	0.514	
50	65450	6.54E-02	3.27E-04	148.75	6.574	1.816	
60	113097	1.13E-01	5.65E-04	257.04	7.889	5.702	
70	179594	1.80E-01	8.98E-04	408.17	9.203	21.348	
				Interpolation --->	10.000	29.971	**29.971 % of PM is PM10**
90	381704	3.82E-01	1.91E-03	867.51	11.833	49.812	
110	696910	6.97E-01	3.48E-03	1583.89	14.462	70.509	
130	1150347	1.15E+00	5.75E-03	2614.42	17.092	82.023	
150	1767146	1.77E+00	8.84E-03	4016.24	19.722	88.012	
180	3053628	3.05E+00	1.53E-02	6940.06	23.666	91.032	
210	4849048	4.85E+00	2.42E-02	11020.56	27.610	92.468	
240	7238229	7.24E+00	3.62E-02	16450.52	31.554	94.091	
270	10305995	1.03E+01	5.15E-02	23422.72	35.499	94.689	
300	14137167	1.41E+01	7.07E-02	32129.92	39.443	96.288	
350	22449298	2.24E+01	1.12E-01	51021.13	46.017	97.011	
400	33510322	3.35E+01	1.68E-01	76159.82	52.591	98.34	
450	47712938	4.77E+01	2.39E-01	108438.50	59.165	99.071	
500	65449847	6.54E+01	3.27E-01	148749.65	65.738	99.071	
600	113097336	1.13E+02	5.65E-01	257039.40	78.886	100.000	

Calculations based on approach presented in: Calculating Realistic PM10 Emissions from Cooling Towers
Joel Reisman and Gordon Frisbie, Environmental Progress (Vol 21, No 2), July 2002

Appendix A: Emissions Calculations
VOC and HAP
From HWF Tank Storage (Unit 1)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

				Unscaled			Scaled (up to 52 wk/yr)		
Tank #	Capacity (gal)	Actual Throughput (gpy)	Max Throughput (gpy)	Uncontrolled VOC Emissions, lb/yr (TANKS 4.0)	Uncontrolled VOC Emissions, ton/yr	Controlled VOC Emissions, ton/yr	Uncontrolled VOC Emissions, lb/yr (TANKS 4.0)	Uncontrolled VOC/HAP Emissions, ton/yr	Controlled VOC/HAP Emissions, ton/yr
29[a]	20,057	501,425	1,002,850	1,933	0.97	0.010	2,010	1.01	0.010
1R	12,690		1,625,000	1,432	0.72	0.007	1,432	0.72	0.007
4	12,690		1,625,000	1,432	0.72	0.007	1,432	0.72	0.007
18	20,353		1,625,000	2,027	1.01	0.010	2,027	1.01	0.010
19	20,353		1,625,000	2,027	1.01	0.010	2,027	1.01	0.010
20	20,353		1,625,000	2,027	1.01	0.010	2,027	1.01	0.010
21	20,353		1,625,000	2,027	1.01	0.010	2,027	1.01	0.010
22	20,353		1,625,000	2,027	1.01	0.010	2,027	1.01	0.010
23	20,353		1,625,000	2,027	1.01	0.010	2,027	1.01	0.010
6	4,386		228,072	424	0.21	0.002	424	0.21	0.002
7	2,900		150,800	275	0.14	0.001	275	0.14	0.001
			TOTAL ALL TANKS	17,658	8.83	0.088	17,735	**8.87**	**0.089**

[a]source assumed one turnover per week, 50 weeks per year. Emissions from this tank are scaled up to 52 weeks per year.

Note: Above calcultions are from pemit number T 089-29424-00345, issued on February 25, 2011.

Appendix A: Emissions Calculations
VOC and HAP
From HWF Shipping and Receiving (Unit 2)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Receiving (Unit 2R)
Unloading of tank cars and rail cars
VOC emissions are estimated using following equation, from Section 5.2 of AP-42:

$L_L = 12.46 * (S*P*M)/T$

LL = Loading loss per 1,000 gal liquid loaded	Used these values:	
S = saturation factor (from Table 5.2-1 of AP-42)	S	0.6
P = true vapor pressure of liquid load (psia)	P	0.97
M = molecular weight of vapors (lb/lb-mole)	M	75
T = temperature of bulk liquid loaded (deg. R)	T	530

L_L =	1.03	lb VOC/1,000 gal
Max throughput =	17,200	gal/hr
Max throughput =	150,672,000	gal/yr
Limited throughput =	41,450,000	gal/yr
Potential VOC/HAP =	**77.3**	**TPY**
Limited VOC/HAP =	**21.3**	**TPY**

Shipping (Unit 2S)
Submerged filling of rail cars.
VOC emissions are estimated using following equation, from Section 5.2 of AP-42:

$L_L = 12.46 * (S*P*M)/T$

LL = Loading loss per 1,000 gal liquid loaded	Used these values:	
S = saturation factor (from Table 5.2-1 of AP-42)	S	0.6
P = true vapor pressure of liquid load (psia)	P	0.97
M = molecular weight of vapors (lb/lb-mole)	M	75
T = temperature of bulk liquid loaded (deg. R)	T	530

L_L =	1.03	lb VOC/1,000 gal
Max throughput =	13,200	gal/hr
Max throughput =	115,632,000	gal/yr
Limited throughput =	41,450,000	gal/yr
Potential VOC/HAP =	**59.3**	**TPY**
Limited VOC/HAP =	**21.3**	**TPY**

Methodology:
Potential VOC/HAP (ton/yr) = Emission factor (lb/1000 gal) / 1000 x Max Throughput (gal/yr) x 1 ton / 2000 lb
Limited VOC/HAP (ton/yr) = Emission factor (lb/1000 gal) / 1000 x Limited Throughput (gal/yr) x 1 ton / 2000 lb
Note: Both Unit 2R and 2S include shipping/receiving Area 2 and Area 8.

Appendix A: Emissions Calculations
VOC and HAP

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Tank 24 (SF Unit)
Tank HP24 Hydropulperis operated on a batch process. The tank is filled, and then pumped into other tanks in Area 2.

(max production)	
2,310	gallons (working)
6	hrs (to fill)
385	gals/hr

Dimensions

	diameter	sidewall	dome	bottom
	9	6	1.5	1.5
volume	3,010			
volume working	*2,310*			

max production (worst case emissions)	
	annual
385	gals/hr
8401	# Hrs /Yr (SERVICE FACTOR)
3,234,323	gals/yr

HP24 Throughput (in gallons)

	hourly	**annual**
PTE	**385**	**3,234,323**
HP 24 filled	6	hours
contents transferred	0.33	hours

service factor calculation

7.67 hrs process, .33 hrs transfer from HP 24 to Area
7.67 / 8 = 95.9 % operation
8760 x 95.90% = 8401 hours of operation / year

check service factor
385 8760 95.90% 3,234,323 gals /yr

Production based "ACTUAL" numbers

2013 11 months	**lbs/gal**	**gallons**		**gals/mth**		**gals/ yr ca**	**hrs /yr**	**gals/hr**
8,367,368	**8.34**	**1,003,282**	**/**	**11**	**91,207**	**x 12 =**	**1,094,489**	**2944**	**372**

gals		time to empty		gals/min
2310	/	20	=	115.5

Potential Emissions

2310 gallons per filling event
3,234,323 max gallons per year
1400 max filling events per year

Compute emissions using liquid loading loss equation from AP-42 Section 5.2

LL = 12.46 (S*P*M)/T
where:
LL = Liquid loading uncontrolled emission factor in lb/1000 gallons
S = Saturation Factor (use worst case factor of 1.45)
P = true vapor pressure (use worst case factor for tolune of 0.435 @ 70 deg F)
M = molecular weight of vapors (use mw of toluene, 92.13)
T = Temperature of liquid (deg R) (assume ambient temp of 70 deg F, 530 deg R)

LL = 1.37 lb/1000 gal
Annual uncontrolled emissions = 4418.6 lbs/yr
2.21 tons/yr

Annual Controlled Emissions = 98% (controlled using carbon canisters; assumed 98% efficient)
88.4 lbs/yr
0.022 tons/yr

Appendix A: Emissions Calculations
VOC and HAP
From Lab Pack/DePack Operation (Unit 4)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Emissions from organic liquid depacking (LP B1 of Unit 4)

Organic liquids are depacked in Booth 1 (LP B1).
Max 27375 containers/yr
Assumptions[a]:
75.5 gal/hr
7.5 lb/gal average density of depacked liquids

Uncontrolled emissions were expected to be low (materials are not agitated, heated, or exposed for long periods of time).
Estimate of emissions as % of quantity depacked: 0.10%

75.5 gal/hr * 7.5 lb/gal * 0.1% = 0.56625 lb VOC/hr **2.48 TPY VOC/HAP uncontrolled**

Estimated control efficiency of carbon adsorber packs: 98% **0.05 TPY VOC/HAP controlled**

[a] These figures are estimates. LP B1 can also vent gaseous emissions from cylinders. However, the depacking of organic liquids is a worst case emissions scenario and therefore presented here.

Emissions from the packing of dry chemicals (LP B4 of Unit 4) - insignificant activity

Baghouse information:

Amount of particulate captured by baghouse per year:	275 lbs	
Operating schedule of baghouse:	2,080 hrs/yr	(8 hrs/day, 5 days/week, 52 weeks/yr)
Estimated capture efficiency of baghouse:	99.90%	

Calculations:
Amount of particulate captured by baghouse per 8,760 hrs:
275 lbs * (8,760 hrs/yr)/(2,080 hrs/yr) * 1 ton/2,000 lbs = 0.58 tons PM/yr

Estimated uncontrolled particulate emissions per 8,760 hours:
0.58 tons PM/yr / (1/0.999) = **0.58** tons PM/yr uncontrolled

Note: Above calcultions are from pemit number T 089-29424-00345, issued on February 25, 2011.

Appendix A: Emissions Calculations
VOC from Degassing Operation

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Emissions from Degassing Unit (After installation of flare)

Type	Maximum Gas VOC Throughput* ton/yr	Maximum Gas HAP Throughput* ton/yr	VOC/HAP Absorbed %	Potential VOC Emissions Before Flare Control (tons/yr)	Potential HAP Emissions Before Flare Control (tons/yr)	Flare Control Efficiency %	Potential VOC Emissions After Flare Control (tons/yr)	Potential HAP Emissions After Flare Control (tons/yr)
Absorbable organics	396.8	14.1	98%	7.9	0.28	98%	0.2	0.01
Light end hydrocarbons	9.0	--	0%	9.0	--	98%	0.2	--
Totals:	405.8			**17.0**			**0.3**	**0.01**

Emissions from Degassing Unit (Prior to installation of flare)

Unit	Maximum Gas VOC Throughput* ton/yr	Maximum Gas HAP Throughput* ton/yr	VOC/HAP Absorbed %	Potential VOC Emissions Before Carbon Adsorber Control (tons/yr)	Potential HAP Emissions Before Carbon Adsorber Control (tons/yr)	Carbon Adsorber Unit Efficiency %	Potential VOC Emissions After Carbon Adsorber Control (tons/yr)	Potential HAP Emissions After Carbon Adsorber Control (tons/yr)
Degassing	198.4	3.1	98%	4.0	0.06	98%	0.1	0.00

*Estimated maximum throughput provided by source based on historic mix of actual cylinders processed. 'Absorbable' gases processed include organic, inorganic, halogenated and inert.

Potential VOC/HAP Emissions Before Flare Control (ton/yr) = Maximum Gas Throughput VOC/HAP (ton/yr) x (1 -VOC/HAP Condensed (%))

Potential VOC/HAP Emissions After Flare Control (ton/yr) = Potential VOC/HAP Emissions Before Flare Control (ton/yr) * (1 - Flare Control Effiency)

Note: Inorganic HAPs are Chlorine and Fluorine and Organic HAPs include 1,3 butadiene, ethylene oxide and others.

Note: The degassing operation includes a reactor tank into which gasses are vented and a pressurized "shock" tank that will condense gasses into liquids for collection and offsite shipment, with remaining gasses controlled by a flare or carbon cannisters.

Note: The use of a flare control system allows cylinders to be degassed more quickly, as the flare can handle a higher air flow rate than is possible with carbon canisters. Further increases in throughput could only be accomplished through a change to a larger reactor or by the installation of a flare that could handle a higher air flow rate.

Note: The addition of a flare control system now allows for the degassing of cylinders containing light end hydrocarbons. These gases are not absorbed into liquid by the shock tank, and therefore assumed to be 100% emitted as VOC (0% absorbed).

Appendix A: Emission Calculations
VOC and HAP
From the SDS Shredder (SDS)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

From the SDS Shredder (SDS)
Process Description:

Max. Throughput Rate: 4.0 tons/hr
VOC Emission Factor: 0.15 lbs/ton (This is provided by the source, based on the stack test results from a similar unit)

Control Equipment: Carbon Adsorption System for VOC/HAP Control
Control Efficiency: 98.0%

Potential to Emit VOC/HAP before Control:
Assume all the VOC emissions are equal to HAP emissions because the HAP contents in the received waste very greatly.

PTE of VOC/HAP before Control = 4 tons/hr x 0.15 lbs/ton x 8760 hr/yr x 1 ton/2000 lbs = **2.63 tons/yr**

Potential to Emit VOC/HAP after Control:
PTE of VOC/HAP after Control = 4 tons/hr x 0.15 lbs/ton x 8760 hr/yr x 1 ton/2000 lbs x (1- 98%) = **0.05 tons/yr**

VOC	**Limited**	0.028	lb/hr
	SDS Shredder	**0.12**	ton/yr

From the SDS Shaker and conveyor
Potential to Emit PM After Control:

Unit	Maximum Air Flow (acfm)	Design Outlet Grain Loading (gr/acf)	Overall control efficiency	After Control Emissions (lb/hr)	After Control Emissions (ton/yr)	Before Control Emissions (lb/hr)	Before Control Emissions (ton/yr)
SDS 04	4400	0.03	90%	1.13	5.0	11.31	49.6
SDS 09	2500	0.03	90%	0.64	2.8	6.43	28.2
Total					7.8		77.7

Note: These emissions were previously calculated based on maximum air flow of 500 acfm.
Assume all the PM emissions are equal to PM10 emissions.

Appendix A: Emission Calculations
Natural Gas Combustion
(MMBtu/hr < 100)
From the NG Combustion in Anaerobic Thermal Desorption Unit (ATDU)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
15.6	136.7

	Pollutant						
	PM*	PM10*	PM2.5	SO_2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84.0
Potential to Emit in tons/yr	**0.13**	**0.52**	**0.52**	**0.04**	**6.83**	**0.38**	**5.74**

*PM and PM10 emission factors are condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100.
Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2,
and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
(AP-42 Supplement D 3/98)

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/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Above calcultions are from pemit number T 089-29424-00345, issued on February 25, 2011.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.10E-03	1.20E-03	7.50E-02	1.80E+00	3.40E-03	
Potential Emission in tons/yr	1.4E-04	8.2E-05	5.1E-03	0.12	2.3E-04	**0.13**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.00E-04	1.10E-03	1.40E-03	3.80E-04	2.10E-03	
Potential Emission in tons/yr	3.4E-05	7.5E-05	9.6E-05	2.6E-05	1.4E-04	**3.7E-04**
					Total HAPs	**0.13**
					Worst HAP	**0.12**

Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas*		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	8,199	0	0
Summed Potential Emissions in tons/yr	8,200		
CO2e Total in tons/yr	8,248		

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) based on 11/29/2013 federal GWPs= 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
VOC and HAP Emissions
From the Distillation Unit

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Process Description:

Max. Throughput Rate: 1.0 ton/hr
VOC Emission Factor: 0.52 lbs/ton (This is provided by the manufacturer)
Control Equipment: Carbon Adsorption System for VOC/HAP Control
Control Efficiency: 98.0%

Potential to Emit VOC/HAP before Control:

Assume all the VOC emissions are equal to HAP emissions because the HAP contents in the received waste very greatly.

PTE of VOC/HAP before Control = 1 tons/hr x 0.52 lbs/ton x 8760 hr/yr x 1 ton/2000 lbs = **2.28 tons/yr**

Potential to Emit VOC/HAP after Control:

PTE of VOC/HAP after Control = 1 tons/hr x 0.52 lbs/ton x 8760 hr/yr x 1 ton/2000 lbs x (1- 98%) = **0.05 tons/yr**

Note: Above calcultions are from pemit number T 089-29424-00345, issued on February 25, 2011.

Limited	lb/hr	ton/yr
Distillation Unit	0.014	0.06

Appendix A: Emission Calculations
Tank VOC Emissions

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Emission Unit	Tank Volume	Working Loss	Breathing Loss	VOC Total Emissions			
	Gallons	lbs/year	lbs/year	lbs/year	TPY	lbs/day	lbs/hr
52	12,000	77.8	0.0	77.8	0.04	0.21	0.01
53	12,000	77.8	0.0	77.8	0.04	0.21	0.01
54	12,000	77.8	0.0	77.8	0.04	0.21	0.01
55	20,000	646.9	206.2	853.1	0.43	2.34	0.10

Tanks 52-55 **Total** 1086.5 **0.5**

Emission Unit	Tank Volume	Working Loss	Breathing Loss	VOC Total Emissions			
	Gallons	lbs/year	lbs/year	lbs/year	TPY	lbs/day	lbs/hr
57	20,000	646.9	206.2	853.1	0.43	2.34	0.10
58	20,000	646.9	206.2	853.1	0.43	2.34	0.10
59	6,000	360.9	0.0	360.9	0.18	0.99	0.04
60	6,000	360.9	0.0	360.9	0.18	0.99	0.04
61	20,000	646.9	206.2	853.1	0.43	2.34	0.10
62	12,000	77.8	0.0	77.8	0.04	0.21	0.01
63	12,000	77.8	0.0	77.8	0.04	0.21	0.01
64	12,000	77.8	0.0	77.8	0.04	0.21	0.01
65	12,000	77.8	0.0	77.8	0.04	0.21	0.01
66	12,000	77.8	0.0	77.8	0.04	0.21	0.01
67	12,000	77.8	0.0	77.8	0.04	0.21	0.01

Tanks 57-67 **Total** 3747.9 **1.9**

Note: Storage tank emissions are estimated using USEPA's Tanks 4.0.9D software program and provided by the source.

Appendix A: Emissions Calculations
VOC and HAP
Pot Still

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Tradebe Pot Still Minor Source Modification Emissions Calculations

2013 Pot Still Data	
Max Capacity (gal/hr)	70
Hrs Operation (hr/yr)	6607
Throughput (gal/yr)	326032
VOC Adsorption Rate (lb VOC/lb carbon)	0.25
Control Efficiency (99%)	99.0%
Carbon Used (lbs)	10800
Total Changeouts per year	54
Carbon/Changeout (lbs)	200
Actual Gallons/Hour	49.35
Carbon Used/gal (lbs/gal)	0.033

Proposed Modified Unit	
Modified Capacity (gal/hr)	115
Max Hrs Operation (hr/yr)	8760
Max Throughput (gal/yr)	1007400
VOC Adsorption Rate (lb VOC/lb carbon)	0.25
Control Efficiency (98%)	98.0%
Est Max Carbon Used (lbs)	33370.7
Est Max Changeouts per year	166.9
Carbon/Changeout (lbs)	200

	2013 Actual Data	Potential VOC Emissions (Modified Unit)	Potential HAP Emissions (Modified Unit)*
Uncontrolled VOC Emissions (lbs/yr)	2700.0	8342.7	8342.7
Controlled VOC Emissions (lbs/yr)	27.0	166.9	166.9
Uncontrolled VOC Emissions (lbs/gal)	0.0083	0.0083	0.0083
Controlled VOC Emissions (lbs/gal)	8.28E-05	1.66E-04	1.66E-04

	2013 Actual Data	Potential VOC Emissions (Modified Unit)	Potential HAP Emissions (Modified Unit)*
Total Uncontrolled VOC Emissions (tons/yr)	1.35	4.17	4.17
Total Controlled VOC Emissions (tons/yr)	0.01	0.08	0.08

*Based on conservative assumption, HAPs emissions are assumed equal to VOC emissions.
Potential to emit was back calculated from 2013 carbon usage.
Uncontrolled VOC Emissions (lbs/yr) = Total Changeouts/year x lbs carbon/Changeout x VOC Adsorption Rate (lb VOC/lb carbon)
Controlled VOC Emissions (lbs/yr) = Uncontrolled VOC Emissions (lbs/yr) * (1 - Control Efficiency)
Uncontrolled VOC Emissions (lbs/gal) = Uncontrolled VOC Emissions (lbs/yr) / Throughput (gal/yr)
Controlled VOC Emissions (lbs/gal) = Uncontrolled VOC Emissions (lbs/gal) * (1- Control Efficiency)
Total Uncontrolled VOC Emissions (tons/yr) = Total Uncontrolled VOC PTE (lbs/yr) / 2000 lbs/ton
Total Controlled VOC Emissions (tons/yr) = Total Uncontrolled VOC PTE (tons/yr) * (1- Control Efficiency)

Appendix A: Emission Calculations
Natural Gas Combustion (MMBtu/hr < 100)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Thin Film Evaporator

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.4	21.0

	Pollutant						
Combustion	PM*	PM10*	PM2.5	SO_2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84.0
Potential to Emit in tons/yr	**0.02**	**0.08**	**0.08**	**0.01**	**1.05**	**0.06**	**0.88**
					Additional VOC	**0.03**	
					Total VOC	**0.09**	

*PM and PM10 emission factors are condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

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/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.10E-03	1.20E-03	7.50E-02	1.80E+00	3.40E-03	
Potential Emission in tons/yr	2.2E-05	1.3E-05	7.9E-04	0.02	3.6E-05	**0.02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.00E-04	1.10E-03	1.40E-03	3.80E-04	2.10E-03	
Potential Emission in tons/yr	5.3E-06	1.2E-05	1.5E-05	4.0E-06	2.2E-05	**5.8E-05**
					Total HAPs	**0.02**
					Worst HAP	**0.02**

Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas*		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,261	0.02	0.02
Summed Potential Emissions in tons/yr	1,261		
CO2e Total in tons/yr	1,269		

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) based on 11/29/2013 federal GWPs= 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 (MMBtu/hr < 100)

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Hot Oil Heater

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.5	21.9

	Pollutant						
	PM*	PM10*	PM2.5	SO_2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84.0
Potential to Emit in tons/yr	**0.02**	**0.08**	**0.08**	**0.01**	**1.10**	**0.06**	**0.92**

*PM and PM10 emission factors are condensable and filterable PM10 combined.

**Emission Factors for NO_x: Uncontrolled = 100.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

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/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.10E-03	1.20E-03	7.50E-02	1.80E+00	3.40E-03	
Potential Emission in tons/yr	2.3E-05	1.3E-05	8.2E-04	0.02	3.7E-05	**0.02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.00E-04	1.10E-03	1.40E-03	3.80E-04	2.10E-03	
Potential Emission in tons/yr	5.5E-06	1.2E-05	1.5E-05	4.2E-06	2.3E-05	**6.0E-05**
					Total HAPs	**0.02**
					Worst HAP	**0.02**

Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas*		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,314	0.03	0.02
Summed Potential Emissions in tons/yr	1,314		
CO2e Total in tons/yr	1,322		

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) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Fugitive PM
From Paved/Unpaved Roads and Storage Piles

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Truck Dumping
E = k(0.0032) * (U/5)^1.3 / (M/2)^1.4

E =	Emission Factor (lbs/ton)	
k =	0.35	particle size multilplier for PM-10
	0.74	particle size multilplier for PM
U =	10.3	mean wind speed (mph)
M =	5	material moisture content (fraction)

PM Emission Factor:
E = 0.00168 lb/ton

PM-10 Emission Factor:
E = (0.35)(0.0032) * (12.7/5)^1.3 / (10%/2)^1.4
E = 0.00079 lb/ton

Annual potential amount of dry material delivered by truck = 1980 tpy
Potential PM Emissions (tons/year) = Emission factor (lb/ton) * Gypsum delivered (tpy) / 2000 (lbs/ton)
Potential PM Emissions (tons/year) = **0.0017 tpy**
Potential PM-10 Emissions (tons/year) = Emission factor (lb/ton) * Gypsum delivered (tpy) / 2000 (lbs/ton)
Potential PM-10 Emissions (tons/year) = **0.0008 tpy**

Paved Roads
Maximum Vehicular Speed: 5 mph
Average Distance of Haul: 0.15 miles

Vehicle Type	No. of One Way Trips per Hour	Weight
Tanker	0.29	37.5
Vans	0.25	35
Roll Off Boxes	0.08	35
Dump Truck	0.04	37.5
total	0.66	

Weighted Average Gross Weight: 36.25 tons
Calculations:

E = k(sL/2)^0.65 * (W/3)^1.5

E =	Emission factor (lbs/vehicle miles traveled(VMT))	
k =	0.016	particle size multiplier for PM-10
	0.082	particle size multiplier for PM
sL	3	road surface silt content (g/m^2)
W	36.25	weighted average vehicle weight (tons) (calculate from table above)

source: AP-42, chapter 13.2.1, p. 13.2.1-6.
VMT= 867.24 (miles/yr)

PM
E = 4.48 lbs/VMT
Potential PM Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)
Potential PM Emissions (ton/yr) = **1.94 tpy**

PM-10
E = 0.87 lbs/VMT
Potential PM-10 Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)
Potential PM-10 Emissions (ton/yr) = **0.38 tpy**

Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Diesel-Fired Emergency Generator

Company Name: Tradebe Treatment and Recycling LLC
Source Address: 4343 Kennedy Avenue, East Chicago, IN 46312
Permit Number: SSM 089-34432-00345 and SPM 089-34503-00345
Reviewer: Heath Hartley

Output Horsepower Rating (hp)	896.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	448,000
Sulfur Content (S) of Fuel (% by weight)	0.500

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	4.05E-03 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.16	0.09	0.09	0.91	5.38	0.16	1.23

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).
**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.22E-03	4.41E-04	3.03E-04	1.24E-04	3.95E-05	1.24E-05	3.32E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Potential Emission of Total HAPs (tons/yr)	**2.47E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.16E+00	6.35E-05	9.30E-06
Potential Emission in tons/yr	260	1.42E-02	2.08E-03

Summed Potential Emissions in tons/yr	**260**
CO2e Total in tons/yr	**261**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O

Indiana Department of Environmental Management
Office of Air Quality

Appendix B – BACT Analyses
Technical Support Document (TSD)
Best Available Control Technology (BACT) Determination

Source Background and Description

Source Name:	Tradebe Treatment and Recycling, LLC
Source Location:	4343 Kennedy Avenue, East Chicago, IN 46312
County:	Lake
SIC Code:	4953 (Refuse Systems)
Operation Permit No.:	T 089-29424-00345
Operation Permit Issuance Date:	February 25, 2011
Significant Source Modification No.:	089-34432-00345
Significant Permit Modification No.:	089-34503-00345
Permit Reviewer:	Heath Hartley

On April 15, 2014, the Office of Air Quality (OAQ) received an application from Tradebe Treatment and Recycling, LLC related to the construction and operation of new emission units at an existing waste management, recycling and fuel processing source. The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the below Best Available Control Technology (BACT) review for the following new emission unit:

(m) One (1) Solids Distillation System, identified as SDS II, approved in 2015 for construction, with a maximum throughput rate of 5.0 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder and feed conveyor, identified as SDS Shredder II, with a processing capacity of 5.0 tons per hour, vented to a carbon adsorption system for VOC control (C37), exhausting to stack SDS II 01.

(2) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU II, with a maximum capacity of 32 MMBtu/hr, using natural gas, no control, exhausting to stack SDS II 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU II is considered an affected facility.

(3) One (1) Vapor Recovery Unit, identified as VRU II, using a John Zink open flare (FL1) for control of non-condensable gases and a carbon adsorption system for backup VOC control (C38), exhausting to stack SDS 07.

(4) One (1) solids handling system, identified as SHS, vented to a baghouse for particulate control (BH3), with VOC/HAP emissions, exhausting to stack SDS II 04.

(5) One (1) Oil-Water Separator, identified as F-01, with a maximum of 22,000 gal, and one interceptor tank identified as F-02 with a maximum of 3,700 gal, associated with the VRU II, venting to a carbon adsorption system for VOC control (C39), exhausting to stack SDS II 03.

(6) Four (4) tanks, identified as Tank 81 through 84, each with a maximum of 12,000 gal, used to store liquid products venting to a common carbon adsorption system for VOC control (C40), exhausting to stack SDS II 08.

(7) One (1) tank, identified as Tank 85 used to store process water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C41), exhausting to stack SDS II 07.

(8) One (1) tank, identified as Tank 86 used to store process water/light sludge water, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C42), exhausting to stack SDS II 06.

(9) One (1) tank, identified as Tank 87 used to store oil/solvent, with a maximum of 22,000 gal, venting to a carbon adsorption system for VOC control (C43), exhausting to stack SDS II 06.

(10) One (1) insignificant cooling tower, identified as SDS II 13.

Under 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

The Permittee provided additional information on July 8, 2014, regarding potential emissions from the existing Solids Distillation System (SDS). Based on the information provided, the total combined potential VOC emissions from the Solids Distillation System (SDS), Distillation Unit, Tanks 52-55, and the Pot Still is greater than twenty-five (25) tons per year; therefore a Best Available Control Technology (BACT) review is also included for the following existing emission units:

(d) One (1) Solids Distillation System (SDS), constructed in 2004, with a maximum throughput rate of 4 tons of waste per hour, consisting of:

(1) One (1) SDS Shredder, approved for modification in 2013, using a variable speed fan and carbon adsorption system for VOC control (C14), exhausting to stacks SDS 01(a) and (b).

(2) One (1) Anaerobic Thermal Desorption System enclosed feed conveyor under nitrogen blanketing, and enclosed in a chilled jacket, using a carbon adsorption system for VOC control (C15), exhausting to SDS 03.

(3) One (1) Anaerobic Thermal Desorption Unit, identified as ATDU, with one (1) 15.6 MMBtu/hr natural gas fired heater, exhausting to stack SDS 02.

Under 40 CFR 63, Subpart DDDDD, the ATDU is considered an affected facility.

(4) One (1) Oil-Water Separator, using a carbon adsorption system for VOC control (C16), exhausting to stack SDS 03.

(5) One (1) water tank, using a carbon adsorption system for VOC control (C17), exhausting to stack SDS 08.

(6) One (1) Vapor Recovery Unit (VRU), using an enclosed John Zink flare (FL1) with a demister (and a carbon adsorption system as backup (C18)) for VOC control, exhausting to stack SDS 07.

(7) One (1) solids shaker and conveyor system, using two (2) baghouses for particulate control (BH1-BH2), exhausting to stacks SDS 04 and SDS 09.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(e) One (1) Distillation Unit, constructed in 2004, with a maximum throughput rate of 1.0 tons of liquid waste per hour, controlled by a carbon adsorption system (C19), and exhausting to stack SDS 05.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

(f) One (1) condensed liquid tank, identified as Tank 55, constructed in 2004, with a nominal capacity of 20,000 gallons, used to collect oil from the oil-water separator, controlled by a carbon Adsorption system (C20), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(g) Three (3) RCRA hazardous waste tanks, identified as Tanks 52 through 54, constructed in 2004, each with a nominal capacity of 12,000 gallons, controlled by a carbon adsorption system (C21), and exhausting to stack SDS 08.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V and 40 CFR 61, Subpart FF, this unit is considered an affected facility.

(i) One (1) Pot Still, constructed in 2007 and modified in 2015, with a maximum throughput rate of 115 gallons of liquid waste per hour, controlled by a carbon adsorption system (C33), and exhausting to stack SDS 10.

Under 40 CFR 61, Subpart J, 40 CFR 61, Subpart V, 40 CFR 61, Subpart FF and 40 CFR 63, Subpart FFFF, this unit is considered an affected facility.

Emission Calculations

See Appendix A – Emission Calculations – of this TSD for detailed Potential to Emit (PTE) calculations.

Requirement for VOC BACT

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), Best Available Control Technology (BACT) is required for all facilities constructed after January 1, 1980 that have potential VOC emissions of equal to or greater than twenty-five (25) tons per year and are not regulated by other rules in 326 IAC 8.

The proposed new Solids Distillation System (SDS II) has potential VOC emissions greater than twenty-five (25) tons per year. In addition, the Permittee provided additional information on July 8, 2014, regarding potential emissions from the existing Solids Distillation System (SDS). Based on the information provided, the total combined potential VOC emissions from the Solids Distillation System (SDS), Distillation Unit, Tanks 52-55, and the Pot Still is greater than twenty-five (25) tons per year.

Therefore, the Permittee is required to control VOC emissions from the emission units associated with the SDS and SDS II systems, the Distillation Unit, Tanks 52-55, and the Pot Still pursuant to the provisions of 326 IAC 8-1-6 (BACT).

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to significant degradation of air quality, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process, consisting of five (5) steps. The Office of Air Quality (OAQ) makes BACT determinations by following the five (5) steps as outlined below.

Step 1: Identify Potential Control Technologies

The first step is to identify potentially "available" control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories. Available control options may also include lower-emitting materials/processes and work practices, and operational limitations. Although innovative technologies may be included as a potentially available control option, there is no requirement in the State or Federal regulations to require innovative control to be evaluated in Step 1 or used as BACT.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative control technology is projected to have equivalent or better emission reductions to the best available control technology. The source has not requested to use an innovative control technology; therefore, the OAQ will not evaluate or require any innovative controls for this BACT analysis. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. If the top option is selected as BACT and there are no significant environmental impacts, then the BACT Review ends with selection of the top option as BACT. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

This BACT determination is based on the following information:

(1) The BACT analysis information submitted by Tradebe Treatment and Recycling, LLC on April 15, 2014 and July 8, 2014.

(2) The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database search results based on the following criteria:

(A) SIC Code 4953 (Refuse Systems)
(B) Process Type Code 29.200 (Hazardous Waste Treatment, Storage & Disposal Facilities)
(C) Process Type Code 29.300 (Waste Recycling Processes)
(D) Process Type Code 29.900 (Other Waste Processing & Disposal Processes)
(E) SIC Code 2869 (Industrial Organic Chemicals, Not Elsewhere Classified)

(3) Indiana Department of Environmental Management (IDEM) air quality permits under SIC Code 4953 (Refuse Systems) and 2869 (Industrial Organic Chemicals, Not Elsewhere Classified).

(4) EPA air pollution control training documents, guidance documents, and other reports, including, but not limited to the following:

(A) Clean Air Technology Center (CATC) Technical Bulletins (TB) and Air Pollution Technology Fact Sheets (FS). These documents are currently located on the internet at: http://www.epa.gov/ttn/catc/products.html

(B) EPA Air Pollution Control Cost Manual, Sixth Edition, EPA-452-B-02-001, January 2002, United States Environmental Protection Agency. This document is currently located on the internet at: http://www.epa.gov/ttn/catc/dir1/c_allchs.pdf

(C) Sources and Control of Volatile Organic Air Pollutants, Student Manual, Air Pollution Training Institute (APTI) Course 482, Third Edition, November 2002, United States Environmental Protection Agency. This manual is available on the internet at: http://www.4cleanair.org/APTI/482combined.pdf; and

(D) Flare Efficiency Study, EPA-600/2-83-052, United States Environmental Protection Agency, July 1983. This document is currently located on the internet at: http://www.epa.gov/ttn/chief/ap42/ch13/related/ref_01c13s05_jan1995.pdf

Step 1 – Identify Potential Control Options

Based on the information reviewed for this BACT determination, the following potentially available control technologies were identified for controlling VOC emissions from the emission units associated with the SDS and SDS II systems, the Distillation Unit, Tanks 52-55, and the Pot Still:

(a) Flare:

Flaring is the process of oxidizing VOC in a waste gas stream by piping the waste gas to a remote, usually elevated location and burning it in a flame using a specially designed burner tip, auxiliary fuel, and steam or air to promote mixing. Flares are generally categorized in two ways: (1) by the height of the flare tip (i.e., ground or elevated), and (2) by the method of enhancing mixing at the flare tip (i.e., steam-assisted, air-assisted, pressure-assisted, or non-assisted). Flares can be used to control almost any VOC stream, and can typically handle large fluctuations in VOC concentration, flow rate, heating value, and inert species content. Flaring is appropriate for continuous, batch, and variable flow vent stream applications, but the primary use is that of a safety device used to control a large volume of pollutant resulting from upset conditions. Flares have primarily been used in petroleum production, petroleum refineries, and chemical plants to control waste gas streams containing low molecular weight VOC with high heating values.

A properly operated flare can achieve 98+% VOC control efficiency when controlling emission streams with heat contents greater than 300 British thermal units per standard cubic foot (Btu/scf). If the waste gas stream has a heat content less than 300 Btu/scf, auxiliary fuel must be introduced in sufficient quantity to make up the difference. The VOC destruction efficiency of a flare depends upon the waste gas characteristics (density, flammability, heating value, and VOC component autoignition temperatures) and the combustion zone conditions (temperature, residence time, mixing, and available oxygen). While flares can provide efficient VOC control, other pollutants such as nitrogen oxides (NOx) and carbon monoxide (CO) are formed from the combustion process. Flares are not generally recommended for controlling gases containing halogen- or sulfur-containing compounds, because of the formation of hydrogen chloride, hydrogen fluoride gas, sulfur dioxide, and other highly corrosive acid gases.

(b) Thermal Oxidizer:

Thermal oxidation is the process of oxidizing VOC in a waste gas stream by raising the temperature above the VOC's autoignition point in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The residence time, temperature, flow velocity and mixing, and the oxygen concentration in the combustion chamber affect the oxidation rate and destruction efficiency. Thermal oxidizers operating costs are relatively high, since they typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain combustion chamber temperature high enough to completely oxidize the contaminant gases. In general, thermal oxidizers are less efficient at treating waste gas streams with highly variable flowrates, since the variable flowrate results in varying residence times, combustion chamber temperature, and poor mixing. In addition, thermal oxidizers are also not generally cost-effective for low-concentration, high-flow organic vapor streams.

Thermal oxidizers can achieve 95-99.99+% VOC control efficiency and can be used over a wide range of organic vapor concentrations, but perform best at inlet concentrations of around 1,500-3,000 ppmv. Thermal oxidizers are typically designed to have a residence time of 0.3 to 1.0 second and combustion chamber temperatures between 1,200 and 2,000°F. In order to meet 98% or greater control or a 20 parts per million by volume (ppmv) compound exit concentration of non-halogenated organics, thermal oxidizers should typically be operated at a residence time of at least 0.75 seconds, a combustion chamber temperature of at least 1600°F, and with proper mixing. While thermal oxidation provides efficient VOC control, other pollutants such as nitrogen oxides and carbon monoxide are formed from the combustion process.

Thermal oxidizers are not generally recommended for controlling gases containing halogen- or sulfur-containing compounds, because of the formation of hydrogen chloride, hydrogen fluoride gas, sulfur dioxide, and other highly corrosive acid gases. It may be necessary to install a post-oxidation acid gas treatment system in such cases, depending on the outlet concentration. This would likely make incineration an uneconomical option. For halogenated VOC streams, a combustion temperature of 2000°F, a residence time of 1.0 second, and use of an acid gas scrubber on the outlet is recommended.

The three types of thermal oxidation systems include direct flame, recuperative, and regenerative thermal oxidizers, which are differentiated by the type of heat recovery equipment used.

(1) Direct Flame Thermal Oxidizer

A direct flame thermal oxidizer is comprised of a combustion chamber and does not include any heat recovery of exhaust air by a heat exchanger.

(2) Recuperative Thermal Oxidizer

A recuperative thermal oxidizer is comprised of the combustion chamber, a heat exchanger for preheating the untreated VOC gas stream, and, if cost-effective, a secondary energy recovery heat exchanger. In a recuperative thermal oxidizer, the

untreated VOC gas stream entering the oxidizer is preheated using the heat content of the treated gas stream exiting the oxidizer using a heat exchanger, resulting in improved oxidizer efficiency and reduced auxiliary fuel usage. Recuperative thermal oxidizers usually are more economical than direct flame thermal oxidizers because they typically recover 40 to 70% of the waste heat from the exhaust gases.

(3) Regenerative Thermal Oxidizer

A regenerative thermal oxidizer typically consists of a set of 2 or 3 packed ceramic beds that are used to recover heat from hot combustion gases that are generated during combustion of the VOC gas stream and auxiliary fuel, resulting in improved oxidizer efficiency and reduced auxiliary fuel usage. An "inlet" bed is used to pre-heat the untreated VOC gas stream, an "outlet" bed is used to recover heat from the treated gas stream, and one bed is in a purge cycle. The purge cycle is needed to prevent emission spikes each time the gas flow is redirected. The oxidizer is operated on a rotating schedule, where the gas flow through the ceramic beds is redirected periodically using a set of gas flow dampers. Once the heat energy of the "inlet" ceramic bed has been depleted, the flow through the system is redirected so that the untreated VOC gas stream entering the oxidizer is directed through the previously heated "outlet" ceramic bed. Regenerative thermal oxidizers have much higher heat recovery efficiencies than recuperative thermal oxidizers, recovering 85 to 95% of the heat from the treated gas stream, and therefore have lower auxiliary fuel requirements. However, compared to direct flame and recuperative thermal oxidizers, regenerative thermal oxidizers typically have higher capital (equipment and installation) costs, are larger and heavier, and have higher maintenance costs.

(c) Catalytic Oxidizer:

Catalytic oxidation is the process of oxidizing organic contaminants in a waste gas stream within a heated chamber containing a catalyst bed in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The catalyst is used to lower the activation energy of the oxidation reaction, enabling the oxidation to occur at lower reaction temperatures compared to thermal oxidizers. The residence time, temperature, flow velocity and mixing, the oxygen concentration, and type of catalyst used in the combustion chamber affect the oxidation rate and destruction efficiency. Catalytic oxidizers typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain combustion chamber temperature high enough to completely oxidize the contaminant gases. Catalytic oxidizers operate at lower temperatures and require less fuel than thermal oxidizers, they have a smaller footprint, and they need little or no insulation.

The catalyst bed is usually composed of the following: (1) the substrate, typically ceramic or metal honeycombs, grids, mesh pads, or beads; (2) the carrier, a high surface area inorganic material such as alumina that is bonded to the substrate that contains a complex pore structure; and (3) the catalyst, a thin layer of material deposited onto the carrier. The most widely used catalysts for VOC oxidation are noble metals, such as platinum, palladium and rhodium or mixtures thereof. Base metal catalysts, such as oxides of chromium, cobalt, copper, manganese, titanium, and vanadium may also be used for VOC oxidation.

Similar to thermal oxidizers, catalytic oxidizers may use regenerative or recuperative heat recovery to reduce auxiliary fuel requirements, where the untreated VOC gas stream entering the catalytic oxidizer is preheated using the heat content of the treated gas stream exiting the catalytic oxidizer.

Catalytic oxidizers can achieve 90-99% VOC control efficiency, depending on the oxidizer design and waste stream characteristics. Catalytic oxidizers are typically designed to have a residence time of 0.5 seconds or less and combustion chamber temperatures between 600 and 1,200°F. Catalytic oxidation is most suited to waste gas streams with little variation in the flow rate and

type and concentration of VOC to be treated. In addition, catalytic oxidizers should not be used for waste gas streams that have a high concentration of particles, silicone, sulfur, halogen compounds, and/or heavy hydrocarbons that can cause fouling or masking of the catalyst, and for waste gas streams that contain metals such as mercury, phosphorus, arsenic, antimony, bismuth, lead, zinc, and/or tin that can cause catalyst poisoning.

(d) Carbon Adsorption Unit:

Carbon adsorption is a process where VOCs are removed from a waste gas stream when it is passed through a bed containing activated carbon particles, which have a highly porous structure with a large surface-to-volume ratio. Carbon adsorption systems usually operate in two phases: adsorption and desorption. During adsorption, the majority of the VOC molecules migrate from the gas stream to the surface of the activated carbon (through the activated carbon pores) where it is lightly held to the surface by weak intermolecular forces known as van der Waals' forces. As the activated carbon bed approaches saturation with VOC, its control efficiency drops, and the bed must be taken offline to be replaced or regenerated. Typically, two activated carbon beds are utilized on a rotating schedule, where a second bed (containing fresh or previously regenerated activated carbon) is brought online to continue controlling the VOC gas stream while the first bed is being replaced or regenerated. In regenerative systems, most VOC gases can be desorbed and removed from the activated carbon bed by heating the bed to a sufficiently high temperature, usually via steam or hot air, or by reducing the pressure within the bed to a sufficiently low value (vacuum desorption). The regenerated activated carbon can be reused and the VOCs that are removed from the bed can be reclaimed or destroyed.

Carbon adsorber size and purchase cost depend primarily on the gas stream volumetric flow rate, temperature, pressure, VOC composition, VOC mass loading, and moisture and particulate contents. The adsorptive capacity of an activated carbon bed for a VOC gas tends to increase with the VOC gas phase concentration, molecular weight, diffusivity, polarity, and boiling point. Carbon adsorption systems can be used for VOC gas concentrations from less than 10 ppm to approximately 10,000 ppm. Carbon adsorption systems (in general) are usually limited to waste gas streams with VOC compounds having a molecular weight of more than 50 and less than approximately 200 lb/lb-mole, since low molecular weight organics usually do not adsorb sufficiently and high molecular weight compounds are difficult to desorb and remove during the desorption cycle. Industrial applications of adsorption systems include control for dry cleaning, degreasing, paint spraying, solvent extraction, metal foil coating, paper coating, plastic film coating, printing, pharmaceuticals, rubber, linoleum, and transparent wrapping.

Carbon adsorption systems can achieve 95-99% VOC control efficiency. Carbon adsorption system control efficiency increases with reduced VOC gas stream temperatures. Therefore, high temperature VOC gas streams are typically cooled prior to entry into the activated carbon bed. Particulate matter and high moisture concentrations present in the gas stream compete with the VOC for pore space within the activated carbon and thereby reduce the VOC adsorptive capacity and control efficiency of the carbon adsorption systems. In addition, particulate matter and moisture can become entrained within the carbon bed, causing operating problems such as increased pressure drop across the bed.

(e) Gas Absorption (wet scrubber):

A wet scrubber is an absorption system in which a waste gas stream is interacted with a scrubbing fluid inside a contact chamber in order to strip particulate or gaseous pollutants from the waste gas stream through the processes of diffusion and dissolution. In many cases, an additive such as an acid, a base, or a VOC oxidizing agent is dissolved in the scrubbing fluid so that the dissolved gaseous pollutant chemically reacts with the scrubbing fluid to form a non-volatile or soluble product, thereby allowing additional gaseous pollutant to be absorbed by the scrubbing fluid. The four types of wet scrubber systems include packed towers, plate (or tray) columns, venturi scrubbers, and spray chambers. Gas and liquid flow through an absorber may be countercurrent, crosscurrent, or cocurrent. When used as an emission control technique, wet

scrubbers are typically used for controlling particulate, acid gases, halogen gases, and highly soluble gases such as sulfur dioxide and ammonia.

If a wet scrubber is used for VOC control, the scrubbing fluid chosen should have a high solubility for the VOC gas, a low vapor pressure, a low viscosity, and should be relatively inexpensive. Water is the most commonly used scrubbing fluid for absorbing highly water-soluble (hydrophilic) VOC compounds such as methanol, ethanol, isopropanol, butanol, acetone, and formaldehyde. Other scrubbing fluid such as mineral oils, nonvolatile hydrocarbon oils, and aqueous solutions containing surfactants or amphiphilic block copolymers may be used for absorbing water-insoluble (hydrophobic) VOC compounds. Physical absorption is typically enhanced by lower temperatures, greater scrubbing fluid contacting time and surface area, higher scrubbing fluid to VOC ratio, and higher VOC concentrations in the gas stream.

Wet scrubber systems can achieve 70-99% VOC control efficiency, depending on the VOC solubility in the scrubbing fluid, the VOC-scrubbing fluid temperature, the scrubbing fluid contacting time and surface area, the scrubbing fluid to VOC ratio, the VOC concentration in the gas stream, and whether the scrubbing fluid contains a VOC oxidizing agent. Wet scrubber absorption system control efficiency increases with reduced VOC gas stream temperatures. Therefore, high temperature VOC gas streams are typically cooled prior to entry into the wet scrubber. When used to control VOC, the spent scrubbing fluid must be regenerated, treated, or shipped offsite for proper disposal.

(f) Condensation Unit:

Condensation is the separation of VOCs from an emission stream through a phase change, by either increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. Three types of condensers are used for air pollution Controls: (1) conventional non-refrigeration systems (such as cold-water direct contact condensers similar to wet scrubbers and cold-water indirect heat exchangers); (2) refrigeration systems (including mechanical compression refrigeration using chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs) and Reverse Brayton Cycle refrigeration); and (3) cryogenic systems that utilize liquid nitrogen (including direct contact condensers and indirect heat exchangers).

Condensation units control VOC more efficiently when they are used for gas streams containing high concentrations of VOC and with low exhaust volumes. Condensation units are typically utilized at sources where there is a significant cost benefit to recovering the organic liquid for reuse, where the recovered organic liquids do not contain multiple organic compounds or water that require separation, and where the heat content of gas stream will not overload the refrigeration system. In addition, condensation units are typically used only on gas streams that have little or no particulate contamination, which can cause fouling within the condensation equipment and reduced heat transfer efficiency. Some industrial applications where refrigerated condensers are used include the dry cleaning industry, degreasers using VOC or halogenated solvents, transfer of volatile organic liquid or petroleum products, and vapors from storage vessels.

Cold-water (non-refrigeration) condensation systems can achieve 90-99% VOC control efficiency, depending on the vapor pressures of the specific compounds. Condensation units using mechanical compression refrigeration (using CFC or HFC) can achieve 90+% VOC control efficiency, condensation units using Reverse Brayton Cycle refrigeration can achieve 98% VOC control efficiency, and condensation units using cryogenic (liquid nitrogen) cooling can achieve 99+% VOC control efficiency.

(g) Hours of Operation Limitation

A limit in the hours of operation for the emission unit may be used. Limiting the hours of operation for an emission unit will not destroy VOCs; however it will minimize the amount of VOC emissions produced.

(h) Throughput Limitation

A limit of the material throughput for the emission unit may be used. Limiting the material throughput for an emission unit will not destroy VOCs; however it will minimize the amount of VOC emissions produced.

Review of U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) Database

The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database was reviewed to identify control requirements and limitations for facilities that are similar to the Vapor Recovery Unit for a Solids Distillation System at this source. The RBLC search did not identify any facilities similar to the Vapor Recovery Unit for a Solids Distillation System at this source. The RBLC search only identified landfills, ethanol plants, soybean processing, etc. These facilities typically only control one primary type of chemical (e.g., methane, ethanol, methanol, hexane). However, the operation at this source will process organic gases/vapors from more than 100 different organic chemicals, each with different physical/chemical properties. Therefore, these sources were not considered as part of this BACT.

BACT Application and IDEM Air Quality Permits

The review of Indiana Department of Environmental Management (IDEM) air quality permits for facilities operating under SIC Codes 4953 (Refuse Systems) and 2869 (Industrial Organic Chemicals, Not Elsewhere Classified) identified one source that performs waste management/chemical recycling (see Table 1 below for Reclaimed Energy) that could be considered similar to the Vapor Recovery Unit for a Solids Distillation System at this source. In addition, Table 1 below also contains BACT determinations for two (2) landfills that Tradebe Treatment and Recycling, LLC, cited in their BACT application.

Table 1. Air Quality Permits Search Determinations

Facility Information	Permit # (Issuance Date)	Process Description	Pollutant and Requirements	Basis
Tradebe Treatment and Recycling, LLC: East Chicago, IN (waste management, recycling and fuel processing source)	089-34432-00345 (TBD)	SDS VRU and SDS VRU II	VOC: VRU and VRU II controlled by flare at 98% control, with carbon absorption at 98% as backup. SDS VRU VOC (after control) < 23.4 tons/yr. SDS II VOC (after control) < 95.6 tons/yr.	Proposed State BACT
Tradebe Treatment and Recycling, LLC: East Chicago, IN (waste management, recycling and fuel processing source)	089-34432-00345 (TBD)	SDS Shredder/ SDS Shredder II, Anaerobic Thermal Desorption System enclosed feed conveyor, Oil-Water Separator, Tanks 52-55, 81-87, F-01, F-02, Distillation Unit and Pot Still	VOC: carbon absorption at 98%	Proposed State BACT
Rumpke Sanitary Landfill - Cincinnati, OH (Landfill)	P0112732 (9/24/13) OH-0358	Landfill gas recovery plant	CO: 123.44 lb/hr NOx: 26.0 lb/hr PM10: 7.3 lb/hr Dichlorodifluoromethane: 0.37 ton/yr	State BACT
Rumpke Sanitary Landfill - Georgetown, OH (Landfill)	07-00574 (12/23/08) OH-0330	landfill	CO: 37.02 ton/yr PM10: 0.08 ton/yr	PSD BACT
		Candlestick flare	CO: 22.5 lb/hr NOx: 1.2 lb/hr PM10: 0.51 lb/hr	
		Enclosed Combustors	CO: 79.9 lb/hr NOx: 21.78 lb/hr PM10: 6.1 lb/hr	
Reclaimed Energy (stationary waste management operation – including chemical recycling)	041-6719-00015 (6/1/01)	Vacuum distillation unit, fractionation columns, vacuum pump, pot still 1, thin film evaporators No. 1 or 2	VOC < 58.9 tons/yr and shall operate catalytic thermal oxidizer.	State BACT

Step 2 – Eliminate Technically Infeasible Control Options

The technical feasibility of the VOC control options for each of the emission units associated with the SDS and SDS II systems, Tanks 52-55, the Distillation Unit, and the Pot Still are summarized Table 2 below:

Table 2. Technically Feasibility of Control Options

Control Device	Emission Unit						
	SDS Shredder/ SDS Shredder II	ATDU/ ATDU II	VRU/ VRU II	Oil-Water Separator	Water Tank, Tanks 52-55, 81-87, F-01, F-02	Distillation Unit	Pot Still
	Technically Feasible? (Yes or No)						
Flare	Yes	No*	Yes	Yes	Yes	Yes	Yes
Regenerative Thermal Oxidizer (RTO)	Yes	No*	Yes	Yes	Yes	Yes	Yes
Recuperative Thermal Oxidizer	Yes	No*	Yes	Yes	Yes	Yes	Yes
Catalytic Oxidizer	Yes	No*	Yes	Yes	Yes	Yes	Yes
Carbon Adsorbers	Yes	No*	Yes	Yes	Yes	Yes	Yes
Gas Absorbers (wet scrubber):	Yes	No*	Yes	Yes	Yes	Yes	Yes
Condensation Unit	Yes	No*	No**	No**	No**	No**	No**
Hours of Operation Limit	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Throughput Limit	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*Emissions from ATDU/ATDU II are from natural gas combustion only in the process heaters. PTE of VOC from the ATDU is only 0.38 tons/year and only 0.76 tons/year from the ATDU II. It is not practical or cost effective to use an add-on control device to control this minimal amount of VOC, since additional capital and operating costs would be incurred.

**The use of a condensation unit is not feasible to control the VOC emissions from these units, because the condensable organic compounds have already been removed from the gas stream. The use of a condensation unit will not be considered as BACT for this operation.

Step 3 – Rank Remaining Control Options by Control Effectiveness

The remaining technically feasible options for controlling VOC emissions from the vapor recovery units, SDS VRU and SDS VRU II, are ranked in order of control efficiency in Table 3 below:

Table 3. Control Effectiveness for Technically Feasible Control Options: SDS VRU and SDS VRU II

Control Technology	Control Efficiency (%)
Flare	98.0%
Regenerative Thermal Oxidizer (RTO)	98.0%
Recuperative Thermal Incineration	98.0%
Catalytic Incinerators	98.0%
Carbon Adsorbers	98.0%
Gas Absorption	98.0%
Hours of Operation Limit	None*
Throughput Limit	None*

*This limit would not destroy VOC emissions, but would only reduce the production of VOC emissions. IDEM OAQ has determined that limiting hours of operation and limiting throughput can be considered equivalent control, since they both would have the same effect of limiting VOC emissions.

The remaining technically feasible options for controlling VOC emissions from the SDS Shredder/SDS Shredder II, Oil-Water Separator, Tanks 52-55, 81-87, F-01, F-02, Distillation Unit, and Pot Still are ranked in order of control efficiency in Table 4 below:

Table 4. Control Effectiveness for Technically Feasible Control Options: SDS Shredder/SDS Shredder II, Oil-Water Separator, Tanks 52-55, 81-87, F-01, F-02, Distillation Unit, and Pot Still

Control Technology	Control Efficiency (%)
Regenerative Thermal Oxidizer (RTO)	98.0%
Recuperative Thermal Incineration	98.0%
Catalytic Incinerators	98.0%
Carbon Adsorbers	98.0%
Gas Absorption	98.0%
Condensation Unit (SDS Shredder/SDS Shredder II only)	98.0%
Hours of Operation Limit	None*
Throughput Limit	None*

*This limit would not destroy VOC emissions, but would only reduce the production of VOC emissions. IDEM OAQ has determined that limiting hours of operation and limiting throughput can be considered equivalent control, since they both would have the same effect of limiting VOC emissions.

IDEM is aware that the above control technologies may be able to periodically achieve control efficiencies that exceed 98% under certain operating conditions. However, BACT must be achievable on a consistent basis under normal operational conditions. BACT limitations do not necessarily reflect the highest possible control efficiency achievable by the technology on which the emission limitation is based. The permitting authority has the discretion to base the emission limitation on a control efficiency that is somewhat lower than the optimal level. There are several reasons why the permitting authority might choose to do this. One reason is that the control efficiency achievable through the use of the technology may fluctuate, so that it would not always achieve its optimal control efficiency. In that case, setting the emission limitation to reflect the highest control efficiency would make violations of the permit unavoidable. To account for this possibility, a permitting authority must be allowed a certain degree of discretion to set the emission limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the Permittee to achieve compliance consistently. While we recognize that greater than 98% may be achievable as an average during testing, IDEM allows for sources to include a safety factor, or margin of error, to allow for minor variations in the operation of the emission units and the control device.

Step 4 – Evaluate the Most Effective Controls and Document Results

(a) All of the controls listed in Table 3 are capable of achieving the same level of control. The Permittee has proposed to use a flare as the BACT for controlling VOC emissions from the vapor recovery units, SDS VRU and SDS VRU II for the following reasons:

A flare would be the most effective control, since it can be used to control almost any VOC stream, can typically handle large fluctuations in VOC concentration, flow rate, heating value, and inert species content, and it is appropriate for continuous, batch, and variable flow vent stream applications. As compared to a thermal oxidizer and catalytic oxidizer, a flare would have lower capital and operating costs and would use less auxiliary fuel (e.g., natural gas) to combust the

VOCs, resulting in less emission of nitrogen oxides and carbon monoxide from combustion of the auxiliary fuel.

A flare already exists at the source and is being used to control the SDS VRU. Therefore, this flare is the best option since the costs of purchasing a different, new control device would be much higher and would only achieve similar control efficiency.

(b) All of the controls listed in Table 4 are capable of achieving the same level of control. The Permittee has proposed to use carbon adsorption (carbon canisters) as the BACT for controlling VOC emissions from the SDS Shredder/SDS Shredder II, Anaerobic Thermal Desorption System enclosed feed conveyor, Oil-Water Separator, Tanks 52-55, 81-87, F-01, F-02, Distillation Unit, and Pot Still since the carbon canisters are able to achieve at least a 98% control efficiency.

Step 5: Select BACT

The Permittee proposes to use a flare, with carbon adsorption as backup, as the BACT for controlling VOC emissions vapor recovery units, SDS VRU and SDS VRU II. In addition, the Permittee proposes to use carbon adsorption (carbon canisters) as the BACT for controlling VOC emissions from the SDS Shredder/SDS Shredder II, Anaerobic Thermal Desorption System enclosed feed conveyor, Oil-Water Separator, Tanks 52-55, 81-87, F-01, F-02, Distillation Unit, and Pot Still. Upon evaluation of the BACT analyses, IDEM agrees with the BACT proposed by the source. IDEM, OAQ has determined that the following requirements represent BACT:

(a) The vapor recovery units, SDS VRU and SDS VRU II, shall be controlled by open flare FL1 with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that SDS VRU and/or SDS VRU II are in operation, except during maintenance or malfunction of the flare FL1. During maintenance or malfunction of the flare FL1, the SDS VRU shall be controlled by the carbon adsorption system (C18) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS VRU is in operation and the SDS II VRU II shall be controlled by the carbon adsorption system (C38) with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that the SDS II VRU II is in operation.

(b) VOC emissions after control from the SDS VRU shall be less than 23.4 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) VOC emissions after control from all the emission units associated with the SDS II shall be less than 95.6 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Each of the emission units listed in the table below shall be controlled by the associated carbon adsorption system with an overall VOC control efficiency (including the capture efficiency and destruction efficiency) of equal to or greater than 98%, at all times that each of these emission units are in operation.

Emission Unit(s)	Carbon Adsorption System
SDS Shredder	C14
Anaerobic Thermal Desorption System enclosed feed conveyor	C15
Oil-Water Separator	C16
Water Tank	C17
Distillation Unit	C19
Tank 55	C20
Tanks 52 through 54	C21
Pot Still	C33
SDS Shredder II	C37

Emission Unit(s)	Carbon Adsorption System
F-01 and F-02	C39
Tanks 81 through 84	C40
Tank 85	C41
Tank 86	C42
Tank 87	C43

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Heath Hartley at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.

(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

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Tita LaGrimas
Tradebe Treatment and Recycling, LLC
4343 Kennedy Avenue
East Chicago, IN 46312

DATE: February 25, 2015

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

SUBJECT: Final Decision
Title V Significant Source Modification
089-34432-00345

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:
David Jordan, Environmental Resources Management (ERM)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

February 25, 2015

TO: East Chicago Public Library – Pastrick Branch

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Tradebe Treatment and Recycling, LLC
Permit Number: 089-34432-00345

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	VHAUN 2/25/2015 Tradebe Treatment and Recycling LLC 089-34432-00345 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
3		East Chicago Public Library 1008 W. Chicago Ave. East Chicago IN 46312 *(Library)*									
4		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
5		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
6		Shawn Sobocinski 5950 Old Porter Rd Aprt 306 Portage IN 46368-1558 *(Affected Party)*									
7		Mark Coleman 8 Turret Rd. Portage IN 46368-1072 *(Affected Party)*									
8		Mr. Chris Hernandez Pipefitters Association, Local Union 597 45 N Ogden Ave Chicago IL 60607 *(Affected Party)*									
9		David Jordan Environmental Resources Management (ERM) 11350 North Meridian, Suite 320 Carmel IN 46032 *(Consultant)*									
10		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
11		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									
12		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 *(Affected Party)*									
13		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)									
14		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
15		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									

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2		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
3		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
4		Ryan Dave 939 Cornwallis Munster IN 46321 *(Affected Party)*									
5		David R Case Environmnetal Technology Council 1112 16th Street NW, Suite 420 Washington DC 20036 *(Affected Party)*									
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