INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

To: Interested Parties

Date: June 22, 2021

From: Jenny Acker, Chief
Permits Branch
Office of Air Quality

Source Name: Brightmark Plastics Renewal Indiana 2 LLC

Permit Level: FESOP Renewal

Permit Number: 151-43439-00067

Source Location: 3240 West 800 South, Ashley, IN 46705

Type of Action Taken: Permit Renewal

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, choose Search Option **by Permit Number**, then enter permit 43439. This search will also provide the application received date, **draft permit** public notice start and end date, and **final** permit issuance date.

The final decision is also available via IDEM's Virtual File Cabinet (VFC). Please go to: https://www.IN.gov/idem and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

(continues on next page)

If you would like to request a paper copy of the permit document, please contact IDEM's Office of Records Management:

IDEM - Office of Records Management
Indiana Government Center North, Room 1207
100 North Senate Avenue
Indianapolis, IN 46204
Phone: (317) 232-8667
Fax: (317) 233-6647
Email: IDEMFILEROOM@idem.in.gov

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.

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, Room N103, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

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Bruno L. Pigott, *Commissioner*

Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Brightmark Plastics Renewal Indiana 2 LLC
3240 W 800 S
Ashley, Indiana 46705

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

Operation Permit No.: F151-43439-00067 Master Agency Interest ID.: 111095	
Issued by: Brian Williams, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 22, 2021 Expiration Date: June 22, 2031

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary plastics to fuel processing plant.

Source Address:	3240 W 800 S, Ashley, Indiana 46705
General Source Phone Number:	(440) 773-3517
SIC Code:	2999 (Products of Petroleum and Coal, N.E.C.)
County Location:	Steuben
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor 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 2-8-3(c)(3)]

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

(a) One (1) Feedstock Preparation System, identified as FPS 1, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(1) Unloading plastic from trucks to a tipping floor.

(2) One (1) elevating belt conveyor, identified as FPS1-010, with a maximum rated capacity of 6.615 tons per hour, loaded by front end loader from the tipping floor.

(3) One (1) horizontal initial sort belt conveyor, identified as FPS1-020, with a maximum rated capacity of 6.615 tons per hour, with a magnet for metal removal.

(4) One (1) elevating belt conveyor, identified as FPS1-040, with a maximum rated capacity of 6.615 tons per hour, loading the pre-shredder.

(5) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS1-Preshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(6) One (1) elevating belt conveyor, identified as FPS1-060, with a maximum rated capacity of 6.615 tons per hour, to final sort and metal removal.

(7) One (1) horizontal belt conveyor, identified as FPS1-070, with a maximum rated capacity of 6.615 tons per hour, for final sort and metal removal by a magnet.

(8) One (1) elevating belt conveyor, identified as FPS1-080, with a maximum rated capacity of 6.615 tons per hour, loading the re-shredder.

(9) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS1-Reshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(10) One (1) elevating belt conveyor, identified as FPS1-110, with a maximum rated capacity of 6.615 tons per hour, transferring material from re-shredding to the dryer,

(11) One (1) Witte fluidized bed dryer, identified as FPS1-Dryer, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-1.

(12) One (1) elevating belt conveyor, identified as FPS1-130, with a maximum rated capacity of 6.615 tons per hour, transferring material from FPS1-Dryer to the pelletizer.

(13) One (1) Vecoplan model 660 pelletizer, identified as FPS1-Pelletizer, forming pellets of shredded plastic by mechanical compression, with a maximum capacity of 6.00 tons per hour, using no control and exhausting indoors.

(14) One (1) elevating belt conveyor, identified as FPS1-160, with a maximum rated capacity of 6.615 tons per hour, transferring pellets from the pelletizer to FPS1 pellet loader hopper or FPS1-Bin.

(15) One (1) storage bin for plastic pellets, identified as FPS1-Bin, with a maximum capacity of 432 tons.

(16) One (1) pellet load hopper and elevating belt pellet loader conveyor, identified as FPS1-170, with a maximum rated capacity of 6.615 tons per hour, receiving pellets from conveyor FPS1-160, or via front end loader from FPS1-Bin or FPS2-Bin.

(17) One (1) elevating belt conveyor, identified as FPS1-180, from the pellet loader conveyor to the extruder feed conveyors.

(18) One (1) horizontal belt conveyor, identified as FPS1-190-1, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 1.

(19) One (1) horizontal belt conveyor, identified as FPS1-190-2, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 2.

(20) One (1) horizontal belt conveyor, identified as FPS1-190-5, constructed in 2020, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 5.

(b) Three (3) Plastics Conversion Systems; identified as PCU 1 - North, PCU 2 - North, and PCU 5 - North; and collectively identified as Plastics Conversion Line 1, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(1) Two (2) Bonnot Co. extruders, identified as FPS1 Extruder 1 (for processor PCU 1 - North) and FPS1 Extruder 2 (for processor PCU 2 - North), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, each, using no control with fugitive emissions exhausting to the atmosphere.

(2) One (1) Fulton Model FT-0800HC hot oil heater, identified as FPS1 Hot Oil Heater, fueled by natural gas and/or process fuel gas, constructed in 2020, with a maximum heat input capacity of 6.00 MMBtu/hr, providing heat to FPS1 Extruder 1 and FPS1 Extruder 2, using no control with combustion products exhausting to stack Hot Oil 1.

(3) Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

Under 40 CFR 60, Subpart RRR, processors R-12001 and R-22001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-12001 and R-22001 are affected facilities.

(4) One (1) Bonnot Co. extruder, identified as FPS1 Extruder 5 (for processor PCU 5 - North), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, using no control with fugitive emissions exhausting to the atmosphere.

(5) One (1) plastics-to-fuel processor, identified as R-52001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 5.

Under 40 CFR 60, Subpart RRR, processor R-52001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-52001 is an affected facility.

(c) One (1) Feedstock Preparation System, identified as FPS 2, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(1) Unloading plastic from trucks to a tipping floor.

(2) One (1) elevating belt conveyor, identified as FPS2-010, with a maximum rated capacity of 6.615 tons per hour, loaded by front end loader from the tipping floor.

(3) One (1) horizontal initial sort belt conveyor, identified as FPS2-020, with a maximum rated capacity of 6.615 tons per hour, with a magnet for metal removal.

(4) One (1) elevating belt conveyor, identified as FPS2-040, with a maximum rated capacity of 6.615 tons per hour, loading the pre-shredder.

(5) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS2-Preshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(6) One (1) elevating belt conveyor, identified as FPS2-060, with a maximum rated capacity of 6.615 tons per hour, to final sort and metal removal.

(7) One (1) horizontal belt conveyor, identified as FPS2-070, with a maximum rated capacity of 6.615 tons per hour, for final sort and metal removal by a magnet.

(8) One (1) elevating belt conveyor, identified as FPS2-080, with a maximum rated capacity of 6.615 tons per hour, loading the re-shredder.

(9) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS2-Reshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(10) One (1) elevating belt conveyor, identified as FPS2-110, with a maximum rated capacity of 6.615 tons per hour, transferring material from re-shredding to the dryer,

(11) One (1) Witte fluidized bed dryer, identified as FPS2-Dryer, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-2.

(12) One (1) elevating belt conveyor, identified as FPS2-130, with a maximum rated capacity of 6.615 tons per hour, transferring material from FPS2-Dryer to the pelletizer.

(13) One (1) Vecoplan model 660 pelletizer, identified as FPS2-Pelletizer, forming pellets of shredded plastic by mechanical compression, with a maximum capacity of 6.00 tons per hour, using no control and exhausting indoors.

(14) One (1) elevating belt conveyor, identified as FPS2-160, with a maximum rated capacity of 6.615 tons per hour, transferring pellets from the pelletizer to FPS1 pellet loader hopper or FPS2-Bin.

(15) One (1) storage bin for plastic pellets, identified as FPS2-Bin, with a maximum capacity of 432 tons.

(16) One (1) pellet load hopper and elevating belt pellet loader conveyor, identified as FPS2-170, with a maximum rated capacity of 6.615 tons per hour, receiving pellets from conveyor FPS2-160, or via front end loader from FPS1-Bin or FPS2-Bin.

(17) One (1) elevating belt conveyor, identified as FPS2-180, from the pellet loader conveyor to the extruder feed conveyors.

(18) One (1) horizontal belt conveyor, identified as FPS2-190-3, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 3.

(19) One (1) horizontal belt conveyor, identified as FPS2-190-4, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 4.

(20) One (1) horizontal belt conveyor, identified as FPS2-190-7, constructed in 2020, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 7.

(d) Three (3) Plastics Conversion Systems; identified as PCU 3 - South, PCU 4 - South, and PCU 7 - South; and collectively identified as Plastics Conversion Line 2, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(1) Two (2) Bonnot Co. extruders, identified as FPS2 Extruder 3 (for processor PCU 3 - South) and FPS2 Extruder 4 (for processor PCU 4 - South), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, each, using no control with fugitive emissions exhausting to the atmosphere.

(2) One (1) Fulton Model FT-0800HC hot oil heater, identified as FPS2 Hot Oil Heater, fueled by natural gas and/or process fuel gas, constructed in 2020, with a maximum heat input capacity of 6.00 MMBtu/hr, providing heat to FPS2 Extruder 3 and FPS2 Extruder 4, using no control with combustion products exhausting to stack Hot Oil 2.

(3) Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

Under 40 CFR 60, Subpart RRR, processors R-32001 and R-42001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-32001 and R-42001 are affected facilities.

(4) One (1) Bonnot Co. extruder, identified as FPS2 Extruder 7 (for processor PCU 7 - South), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, using no control with fugitive emissions exhausting to the atmosphere.

(5) One (1) plastics-to-fuel processor, identified as R-72001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 7.

Under 40 CFR 60, Subpart RRR, processor R-72001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-72001 is an affected facility.

(e) One (1) Vapor Management System separating produced liquids from non-condensable vapor, consisting of:

(1) One (1) Direct Contact Cooler System, identified as PFD-13101, constructed in 2020, with a maximum capacity of 1,300 gallons of hydrocarbon liquids per hour, serving Processors R-12001, R-22001, and R-52001, consisting of:

(A) One (1) direct contact cooler tower, identified as T-13101, discharging vapor to VMS Overhead Condenser #1 and bottoms to the VMS Bottoms Cooler or VMS Heavy Hydrocarbon Cooler E-13102.

(B) One (1) Therminol-cooled VMS bottoms cooler, identified as E-13101, discharging to T-13101.

(C) One (1) VMS heavy hydrocarbon cooler, identified as E-13102, discharging to the wax extraction feed tank (TK-15121).

(D) One (1) air-cooled VMS heavy hydrocarbon Therminol cooler, identified as E-13103.

(E) One (1) VMS heavy hydrocarbon cooler Therminol expansion tank, identified as V-13102.

(F) One (1) air-cooled VMS overhead condenser #1, identified as E-13104, discharging to E-13105.

(G) One (1) water-cooled VMS overhead condenser #2, identified as E-13105, discharging to V-13101.

(H) One (1) VMS accumulator, identified as V-13101, discharging non-condensable vapor to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201), medium hydrocarbon to the hydrotreater feed tank (TK-15101) in the tank farm, and wastewater to wastewater treatment.

(2) One (1) Direct Contact Cooler System, identified as PFD-33101, constructed in 2020 and 2021, with a maximum capacity of 1,300 gallons of hydrocarbon liquids per hour, serving Processors R-32001, R-42001, and R-72001, consisting of:

(A) One (1) direct contact cooler tower, identified as T-33101, discharging vapor to VMS Overhead Condenser #1 and bottoms to the VMS Bottoms Cooler or VMS Heavy Hydrocarbon Cooler E-13102.

(B) One (1) VMS bottoms cooler, identified as E-33101, discharging to T-33101.

(C) One (1) air-cooled VMS overhead condenser #1, identified as E-33104, discharging to E-33105.

(D) One (1) water-cooled VMS overhead condenser #2, identified as E-33105, discharging to V-33101.

(E) One (1) VMS accumulator, identified as V-33101, discharging noncondensable gases to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201), medium hydrocarbon to the hydrotreater feed tank (TK-15101) in the tank farm, and wastewater to wastewater treatment.

(3) One (1) VMS and Hydrotreating Fuel Gas H_2S Removal System, identified as PFD-13201, constructed in 2020 and 2021, consisting of:

(A) One (1) hot oil heated hydrogenation pre-heater, identified as E-13203.

(B) One (1) hydrolysis reactor, identified as V-13201.

Under 40 CFR 60, Subpart RRR, V-13201 is an affected facility.

(C) One (1) tower water-cooled VMS fuel gas cooler, identified as E-13201.

(D) Two (2) H_2S treaters operating in series, identified as V-13202A and V-13202B.

Under 40 CFR 60, Subpart RRR, V-13202A and V-13202B are affected facilities.

(E) One (1) chilled water cooled VMS fuel gas chiller, identified as E-13202.

(F) One (1) fuel gas flash drum, identified as V-13203, discharging to the process fuel gas header.

(f) One (1) Hydrotreater System, identified as PFD-14101, constructed in 2020 and 2021, with a maximum throughput of 2,016 gallons of fuel liquids per hour, consisting of:

(1) One (1) hydrogen exchanger, identified as E-14101.

(2) One (1) hot separator, identified as V-14101.

(3) One (1) feed product exchanger, identified as E-14105.

(4) One (1) diolefins reactor, identified as R-14101.

Under 40 CFR 60, Subpart RRR, R-14101 is an affected facility.

(5) Two (2) combined feed exchangers, identified as E-14102A and B.

(6) One (1) hydrotreater charge heater, identified as H-14101, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 1.43 MMBtu/hr, using no control with combustion products exhausting to stack Hydrotreater Heater.

(7) One (1) hydrotreater bed, identified as R-14102.

Under 40 CFR 60, Subpart RRR, R-14102 is an affected facility.

(8) One (1) air-cooled hot separator vapor cooler, identified as E-14103.

(9) One (1) air-cooled hot separator cooler, identified as E-14106.

(10) One (1) cold separator, identified as V-14102.

(11) One (1) hydrotreater product flash drum, identified as V-14103, discharging gases to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201) and hydrocarbon liquids to the fractionator feed tank (TK-15111) in the tank farm.

(g) One (1) Steam Methane Reformer, constructed in 2020 and 2021, supplying hydrogen to the Hydrotreater System (PFD-14101), consisting of:

(1) One (1) SMR hydrogen unit, identified as R-101, generating hydrogen from natural gas and steam.

(2) One (1) natural gas-fueled SMR heater, identified as B-101, with a maximum heat input capacity of 9.00 MMBtu/hr, exhausting to stack SMR Heater.

(h) One (1) Hydrotreater Hydrogen Recycle System, identified as PFD-14201, constructed in 2020 and 2021, consisting of:

(1) One (1) recycle compressor suction K.O. drum, identified as V-14203, receiving hydrogen makeup from the hydrogen plant and hydrogen recycle flash gas from V-14202 in the hydrotreater system, discharging recycle gas to the recycle compressor and purge gas to E-13203 in the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201).

(i) One (1) Fractionation System, identified as PFD-14301, constructed in 2020 and 2021, with a maximum capacity of 4,032 gallons of fuel liquids per hour and a bottlenecked capacity of 17,660,160 gallons of fuel liquids per year, consisting of:

(1) One (1) feed/naphtha exchanger, identified as E-14302, discharging stabilized naphtha to naphtha certified stream tanks (TK-15211 and TK-15212) in the tank farm.

(2) One (1) feed/diesel exchanger, identified as E-14303.

(3) One (1) diesel salt dryer, identified as V-14302, discharging to distillate certified stream tanks (TK-15311 and TK-15312) in the tank farm.

(4) One (1) fractionator charge heater, identified as H-14301, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.46 MMBtu/hr, using no control and exhausting combustion products to stack Fractionator Heater.

(5) One (1) fractionating column, identified as T-14301, discharging, a naphtha side stream to T-14302, a diesel side stream to T-14303, and heavy hydrocarbons to VMS Heavy Hydrocarbon Cooler E-13102.

(6) One (1) air-cooled tower overhead condenser, identified as E-14301.

(7) One (1) naphtha side stripper, identified as T-14302, discharging naphtha to E-14302.

(8) One diesel side stripper, identified as T-14303, discharging diesel to E-14303.

(9) One (1) tower accumulator, identified as V-14301, discharging vapor to E-14304, liquids to tower T-14301, and wastewater to wastewater treatment.

(10) One (1) process fuel gas cooler, identified as E-14304, discharging to V-14303.

(11) One (1) process fuel gas flash drum, identified as V-14303, discharging vapor to the process fuel gas header, and wastewater to wastewater treatment.

(j) One (1) Fulton Model ICX-30 boiler, identified as Fractionator Boiler, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 0.85 MMBtu/hr, using no control and exhausting combustion products to stack Boiler-1.

(k) One (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 (PFD-15501), constructed in 2020, with maximum loading rate of 600 gallons per minute and a limited annual throughput of 17,660,160 gallons of naphtha, controlled by thermal oxidizer X-311.

Under 40 CFR 61, Subpart BB, loading rack LR1 is an affected source.

(l) One (1) loading rack thermal oxidizer, identified as X-311 (PFD-15401), constructed in 2020, using electronic ignition.

(m) One (1) process flare for emergency and startup or shutdown operations, identified as X-400 (PFD-16103), constructed in 2020, with four (4) natural gas fired pilot burners with a maximum total heat input capacity of 0.29 MMBtu/hr.

(n) Unpaved roads.

(o) One (1) Dewaxing System, identified as PFD-14401, constructed in 2020, with a maximum capacity of 7,141 pounds of VMS bottoms per hour, consisting of:

(1) One (1) steam heater, identified as E-14400, discharging to the mixer.

(2) One (1) mixer, identified as M-14400, discharging to scraped wall heat exchanger E-14402.

(3) One (1) scraped wall heat exchanger, identified as E-14402, discharging solvent/wax mixture to scraped wall heat exchanger E-14403 and oil/solvent mixture to the oil/solvent steam heater.

(4) One (1) scraped wall heat exchanger, identified as E-14403, discharging wax and solvent to the primary drum.

(5) One (1) primary drum, identified as V-14401, discharging a solvent/wax mixture to the main filter and an upset or emergency vent stream to flare X-400.

(6) One (1) cross exchanger, identified as E-14409, discharging oil/solvent mixture to the oil/solvent steam heater and oil to wax oil tank TK-15421.

(7) One (1) oil/solvent steam heater, identified as E-14410, discharging oil/solvent mixture to the oil column heater.

(8) One (1) hot oil-heated oil column heater, identified as E-14411, discharging to the oil/solvent distillation column.

(9) One (1) oil/solvent distillation column, identified as T-14401, discharging oil to cross exchanger E-14409 and solvent to the overhead condenser.

(10) One (1) water-cooled overhead condenser, identified as E-14412, discharging solvent to the oil column condensing drum

(11) One (1) oil column condensing drum, identified as D-14405, discharging condensed solvent to T-14401 reflux and the dry solvent/wet solvent drum and an upset or emergency vent stream to flare X-400.

(12) One (1) main filter, identified as F-14401, discharging filtered solvent to the solvent hold drum and a solvent/wax mixture to the secondary filter.

(13) One (1) secondary filter, identified as F-14402, discharging filtered solvent to the solvent hold drum and solvent/wax mixture to the scraped wax conveyor.

(14) One (1) steam-heated scraped wax conveyor, identified as CV-14403, discharging the wax tower F/E exchanger.

(15) One (1) wax tower F/E exchanger, identified as E-14404, discharging wax/solvent mixture to the wax steam heater and wax to tanks TK-15411 and TK-15412.

(16) One (1) wax steam heater, identified as E-14405, discharging to the wax tower heater.

(17) One (1) hot oil-heated wax tower heater, identified as E-14406, discharging to the wax/solvent distillation column,

(18) One (1) wax/solvent distillation column, identified as T-14402, discharging wax to wax tower F/E exchanger and solvent to the wax tower condenser.

(19) One (1) water-cooled wax tower condenser, identified as E-14407, discharging to the wax column condensing drum.

(20) One (1) wax column condensing drum, identified as D-14406, discharging condensed solvent to T-14402 reflux and the dry solvent/wet solvent drum and an upset or emergency vent stream to flare X-400.

(21) One (1) dry solvent/wet solvent drum, identified as D-14403, discharging dry solvent to the dry solvent chiller and wet solvent to the scraped wall heat exchangers.

(22) One (1) refrigerated dry solvent chiller, identified as E-14413, discharging chilled solvent to the main filter and secondary filter.

(23) One (1) solvent hold drum, identified as D-14402, discharging solvent to scraped wall heat exchanger E-14402 and vacuum pump exhaust to the atmosphere.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

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

(a) Emergency generators as follows:

(1) Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

Under 40 CFR 60, Subpart IIII, the emergency generators are affected sources.

Under 40 CFR 63, Subpart ZZZZ, the emergency generators are new affected sources.

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.

- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15211	IFR	Naphtha certified stream	127,200 (483)
15212	IFR	Naphtha certified stream	127,200 (483)

Notes:
1. IFR - internal floating roof

Under 40 CFR 60, Subpart Kb, the naphtha certified stream tanks (TK-15211 and TK-15212) are affected facilities.

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

(a) Water based activities, including the following:

(1) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.
(2) One (1) forced draft cooling tower, with a maximum capacity of 82.8 gallons per hour.

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15101	IFR	Hydrotreater feed	265,000 (1,003)
15111	IFR	Fractionator feed	265,000 (1,003)
15121	FR	Wax extraction feed tank	127,200 (483)
15311	FR	Distillate certified stream	265,000 (1,003)
15312	FR	Distillate certified stream	265,000 (1,003)
15421	FR	Wax oil	56,500 (214)
15602	FR	Slop tank (others)	56,500 (214)

Notes:
1. FR - fixed (frangible) roof, IFR - internal floating roof

A.5 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F151-43439-00067, is issued for a fixed term of ten (10) 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, 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 2-8-6] [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 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), 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) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

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

(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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.12 Emergency Provisions [326 IAC 2-8-12]

(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 except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 Northern 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
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

(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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-3(c)(6) 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 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) 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.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

(a) All terms and conditions of permits established prior to F151-43439-00067 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-8(a)]

(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 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a

certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8 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 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (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 approval required by 326 IAC 2-8-11.1 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 5
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 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
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 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
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 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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) 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 317-233-8590 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

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

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 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.5 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.6 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).

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(c).

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

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.

Testing Requirements [326 IAC 2-8-4(3)]

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-4(1)][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [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 2-8-4] [326 IAC 2-8-5]

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 2-8-4][326 IAC 2-8-5]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

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

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.16 General Reporting Requirements [326 IAC 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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.17 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) One (1) Feedstock Preparation Systems, identified as FPS 1, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(1) Unloading plastic from trucks to a tipping floor.

(2) One (1) elevating belt conveyor, identified as FPS1-010, with a maximum rated capacity of 6.615 tons per hour, loaded by front end loader from the tipping floor.

(3) One (1) horizontal initial sort belt conveyor, identified as FPS1-020, with a maximum rated capacity of 6.615 tons per hour, with a magnet for metal removal.

(4) One (1) elevating belt conveyor, identified as FPS1-040, with a maximum rated capacity of 6.615 tons per hour, loading the pre-shredder.

(5) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS1-Preshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(6) One (1) elevating belt conveyor, identified as FPS1-060, with a maximum rated capacity of 6.615 tons per hour, to final sort and metal removal.

(7) One (1) horizontal belt conveyor, identified as FPS1-070, with a maximum rated capacity of 6.615 tons per hour, for final sort and metal removal by a magnet.

(8) One (1) elevating belt conveyor, identified as FPS1-080, with a maximum rated capacity of 6.615 tons per hour, loading the re-shredder.

(9) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS1-Reshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(10) One (1) elevating belt conveyor, identified as FPS1-110, with a maximum rated capacity of 6.615 tons per hour, transferring material from re-shredding to the dryer,

(11) One (1) Witte fluidized bed dryer, identified as FPS1-Dryer, fueled by natural gas and/or process waste gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-1.

(12) One (1) elevating belt conveyor, identified as FPS1-130, with a maximum rated capacity of 6.615 tons per hour, transferring material from FPS1-Dryer to the pelletizer.

(13) One (1) Vecoplan model 660 pelletizer, identified as FPS1-Pelletizer, forming pellets of shredded plastic by mechanical compression, with a maximum capacity of 6.00 tons per hour, using no control and exhausting indoors.

(14) One (1) elevating belt conveyor, identified as FPS1-160, with a maximum rated capacity of 6.615 tons per hour, transferring pellets from the pelletizer to FPS1 pellet loader hopper or FPS1-Bin.

(15) One (1) storage bin for plastic pellets, identified as FPS1-Bin, with a maximum capacity of 432 tons.

(16) One (1) pellet load hopper and elevating belt pellet loader conveyor, identified as FPS1-170, with a maximum rated capacity of 6.615 tons per hour, receiving pellets from conveyor FPS1-160, or via front end loader from FPS1-Bin or FPS2-Bin.

(17) One (1) elevating belt conveyor, identified as FPS1-180, from the pellet loader conveyor to the extruder feed conveyors.

(18) One (1) horizontal belt conveyor, identified as FPS1-190-1, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 1.

(19) One (1) horizontal belt conveyor, identified as FPS1-190-2, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 2.

(20) One (1) horizontal belt conveyor, identified as FPS1-190-5, constructed in 2020, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 5.

(b) Three (3) Plastics Conversion Systems; identified as PCU 1 - North, PCU 2 - North, and PCU 5 - North; and collectively identified as Plastics Conversion Line 1, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(1) Two (2) Bonnot Co. extruders, identified as FPS1 Extruder 1 (for processor PCU 1 - North) and FPS1 Extruder 2 (for processor PCU 2 - North), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, each, using no control with fugitive emissions exhausting to the atmosphere.

(4) One (1) Bonnot Co. extruder, identified as FPS1 Extruder 5 (for processor PCU 5 - North), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, using no control with fugitive emissions exhausting to the atmosphere.

(c) One (1) Feedstock Preparation Systems, identified as FPS 2, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(1) Unloading plastic from trucks to a tipping floor.

(2) One (1) elevating belt conveyor, identified as FPS2-010, with a maximum rated capacity of 6.615 tons per hour, loaded by front end loader from the tipping floor.

(3) One (1) horizontal initial sort belt conveyor, identified as FPS2-020, with a maximum rated capacity of 6.615 tons per hour, with a magnet for metal removal.

(4) One (1) elevating belt conveyor, identified as FPS2-040, with a maximum rated capacity of 6.615 tons per hour, loading the pre-shredder.

(5) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS2-Preshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(6) One (1) elevating belt conveyor, identified as FPS2-060, with a maximum rated capacity of 6.615 tons per hour, to final sort and metal removal.

(7) One (1) horizontal belt conveyor, identified as FPS2-070, with a maximum rated capacity of 6.615 tons per hour, for final sort and metal removal by a magnet.

(8) One (1) elevating belt conveyor, identified as FPS2-080, with a maximum rated capacity of 6.615 tons per hour, loading the re-shredder.

(9) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS2-Reshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(10) One (1) elevating belt conveyor, identified as FPS2-110, with a maximum rated capacity of 6.615 tons per hour, transferring material from re-shredding to the dryer,

(11) One (1) Witte fluidized bed dryer, identified as FPS2-Dryer, fueled by natural gas and/or processor waste gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-2.

(12) One (1) elevating belt conveyor, identified as FPS2-130, with a maximum rated capacity of 6.615 tons per hour, transferring material from FPS2-Dryer to the pelletizer.

(13) One (1) Vecoplan model 660 pelletizer, identified as FPS2-Pelletizer, forming pellets of shredded plastic by mechanical compression, with a maximum capacity of 6.00 tons per hour, using no control and exhausting indoors.

(14) One (1) elevating belt conveyor, identified as FPS2-160, with a maximum rated capacity of 6.615 tons per hour, transferring pellets from the pelletizer to FPS2 pellet loader hopper or FPS2-Bin.

(15) One (1) storage bin for plastic pellets, identified as FPS2-Bin, with a maximum capacity of 432 tons.

(16) One (1) pellet load hopper and elevating belt pellet loader conveyor, identified as FPS2-170, with a maximum rated capacity of 6.615 tons per hour, receiving pellets from conveyor FPS2-160, or via front end loader from FPS1-Bin or FPS2-Bin.

(17) One (1) elevating belt conveyor, identified as FPS2-180, from the pellet loader conveyor to the extruder feed conveyors.

(18) One (1) horizontal belt conveyor, identified as FPS2-190-3, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 3.

(19) One (1) horizontal belt conveyor, identified as FPS2-190-4, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 4.

(20) One (1) horizontal belt conveyor, identified as FPS2-190-7, constructed in 2020, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 7.

(d) Three (3) Plastics Conversion Systems; identified as PCU 3 - South, PCU 4 - South, and PCU 7 - South; and collectively identified as Plastics Conversion Line 2, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(1) Two (2) Bonnot Co. extruders, identified as FPS2 Extruder 3 (for processor PCU 3 - South) and FPS2 Extruder 4 (for processor PCU 4 - South), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, each, using no control with fugitive emissions exhausting to the atmosphere.

(4) One (1) Bonnot Co. extruder, identified as FPS2 Extruder 7 (for processor PCU 7 - South), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, using no control with fugitive emissions exhausting to the atmosphere.

(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 2-8-4(1)]

D.1.1 FESOP and Prevention of Significant Deterioration (PSD) PM_{10} and $PM_{2.5}$ Minor Limitations [326 IAC 2-8] [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7 not applicable, the Permittee shall comply with the following:

(a) The PM_{10} and $PM_{2.5}$ emissions from the following processes shall not exceed the emission limits in the table below:

Process ID	Process Description	Control ID	PM_{10} Emissions Limits (lbs/hr)	$PM_{2.5}$ Emissions Limits (lbs/hr)
FPS 1	Pre-shred	Baghouse DC-1	1.29	1.29
FPS 1	Re-shred			
FPS 2	Pre-shred			
FPS 2	Re-shred			

Compliance with the above PM_{10} and $PM_{2.5}$ emission limits, combined with the potential to emit PM_{10} and $PM_{2.5}$ from all other emission units at this source, shall limit the source-wide potential to emit of PM_{10} and $PM_{2.5}$ to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable.

D.1.2 Prevention of Significant Deterioration (PSD) PM Minor Limitations [326 IAC 2-2]

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

(a) The PM emissions from the following processes shall not exceed the emission limits in the table below:

Process ID	Process Description	Control ID	PM Emissions Limits (lbs/hr)
FPS 1	Pre-shred	Baghouse DC-1	3.86
FPS 1	Re-shred		
FPS 2	Pre-shred		
FPS 2	Re-shred		

Compliance with the above PM emission limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide potential to emit of PM to less than two hundred fifty (250) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions rate from the following operations shall not exceed the pound per hour limit (E) when operating at the associated process weight rate as listed in the table below:

Process Description	Process Weight Rate (ton/hr)	E 326 IAC 6-3-2 Limit (lb/hr)
FPS1-Preshred[1]	6.615	14.53
FPS1-Reshred[1]	6.615	14.53
FPS2-Preshred[1]	6.615	14.53
FPS2-Reshred[1]	6.615	14.53
FPS1-Dryer[2]	6.615	14.53
FPS2-Dryer[2]	6.615	14.53

Notes:
1. *The shredding processes are all controlled by a single baghouse, DC-1*
2. *The dryers are controlled by material recovery cyclones; however, operation of the cyclones is not required to meet 326 IAC 6-3-2 emission limits.*

D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements [326 IAC 2-8-4(1)]

D.1.5 Particulate Control

In order to assure compliance with Conditions D.1.1, D.1.2, and D.1.3, baghouse DC-1 for particulate control shall be in operation and control emissions from the FPS Pre-shred and Re-shred facilities at all times the FPS Pre-shred and Re-shred facilities are in operation.

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

D.1.6 Testing Requirements [326 IAC 2-1.1-11]

Not later than 180 days after the startup of FPS Pre-shred and Re-shred facilities, the Permittee shall perform PM, PM_{10}, and $PM_{2.5}$ testing of baghouse DC-1 utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)]

D.1.7 Visible Emissions Notations

(a) Visible emission notations of the baghouse DC-1 stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.1.8 Broken or Failed Bag Detection

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

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

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

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.7, the Permittee shall maintain records of daily visible emission notations of the baghouse(s) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) Feedstock Preparation System, identified as FPS 1, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(11) One (1) Witte fluidized bed dryer, identified as FPS1-Dryer, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-1.

(b) Three (3) Plastics Conversion Systems; identified as PCU 1 - North, PCU 2 - North, and PCU 5 - North; and collectively identified as Plastics Conversion Line 1, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(2) One (1) Fulton Model FT-0800HC hot oil heater, identified as FPS1 Hot Oil Heater, fueled by natural gas and/or process fuel gas, constructed in 2020, with a maximum heat input capacity of 6.00 MMBtu/hr, providing heat to FPS1 Extruder 1 and FPS1 Extruder 2, using no control with combustion products exhausting to stack Hot Oil 1.

(3) Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

Under 40 CFR 60, Subpart RRR, processors R-12001 and R-22001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-12001 and R-22001 are affected facilities.

(5) One (1) plastics-to-fuel processor, identified as R-52001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 5.

Under 40 CFR 60, Subpart RRR, processor R-52001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-52001 is an affected facility.

(c) One (1) Feedstock Preparation System, identified as FPS 2, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(11) One (1) Witte fluidized bed dryer, identified as FPS2-Dryer, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-2.

(d) Three (3) Plastics Conversion Systems; identified as PCU 3 - South, PCU 4 - South, and PCU 7 - South; and collectively identified as Plastics Conversion Line 2, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(2) One (1) Fulton Model FT-0800HC hot oil heater, identified as FPS2 Hot Oil Heater, fueled by natural gas and/or process fuel gas, constructed in 2020, with a maximum heat input capacity of 6.00 MMBtu/hr, providing heat to FPS2 Extruder 3 and FPS2 Extruder 4, using no control with combustion products exhausting to stack Hot Oil 2.

(3) Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

Under 40 CFR 60, Subpart RRR, processors R-32001 and R-42001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-32001 and R-42001 are affected facilities.

(5) One (1) plastics-to-fuel processor, identified as R-72001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 7.

Under 40 CFR 60, Subpart RRR, processor R-72001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-72001 is an affected facility.

(e) One (1) Vapor Management System separating produced liquids from non-condensable vapor, consisting of:

(1) One (1) Direct Contact Cooler System, identified as PFD-13101, constructed in 2020, with a maximum capacity of 1,300 gallons of hydrocarbon liquids per hour, serving Processors R-12001, R-22001, and R-52001, consisting of:

(H) One (1) VMS accumulator, identified as V-13101, discharging non-condensable vapor to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201), medium hydrocarbon to the hydrotreater feed tank (TK-15101) in the tank farm, and wastewater to wastewater treatment.

(2) One (1) Direct Contact Cooler System, identified as PFD-33101, constructed in 2020 and 2021, with a maximum capacity of 1,300 gallons of hydrocarbon liquids per hour, serving Processors R-32001, R-42001, and R-72001, consisting of:

(E) One (1) VMS accumulator, identified as V-33101, discharging noncondensable gases to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201), medium hydrocarbon to the hydrotreater feed tank (TK-15101) in the tank farm, and wastewater to wastewater treatment.

(3) One (1) VMS and Hydrotreating Fuel Gas H_2S Removal System, identified as PFD-

13201, constructed in 2020 and 2021, consisting of:

(F) One (1) fuel gas flash drum, identified as V-13203, discharging to the process fuel gas header.

(f) One (1) Hydrotreater System, identified as PFD-14101, constructed in 2020 and 2021, with a maximum throughput of 2,016 gallons of fuel liquids per hour, consisting of:

(6) One (1) hydrotreater charge heater, identified as H-14101, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 1.43 MMBtu/hr, using no control with combustion products exhausting to stack Hydrotreater Heater.

(12) One (1) hydrotreater product flash drum, identified as V-14103, discharging gases to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201) and hydrocarbon liquids to the fractionator feed tank (TK-15403) in the tank farm.

(g) One (1) Steam Methane Reformer, constructed in 2020 and 2021, supplying hydrogen to the Hydrotreater System (PFD-14101), consisting of:

(2) One (1) natural gas-fueled SMR heater, identified as B-101, with a maximum heat input capacity of 9.00 MMBtu/hr, exhausting to stack SMR Heater.

(h) One (1) Hydrotreater Hydrogen Recycle System, identified as PFD-14201, constructed in 2020 and 2021, consisting of:

(1) One (1) recycle compressor suction K.O. drum, identified as V-14203, receiving hydrogen makeup from the hydrogen plant and hydrogen recycle flash gas from V-14202 in the hydrotreater system, discharging recycle gas to the recycle compressor and purge gas to E-13203 in the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201).

(i) One (1) Fractionation System, identified as PFD-14301, constructed in 2020 and 2021, with a maximum capacity of 4,032 gallons of fuel liquids per hour and a bottlenecked capacity of 17,660,160 gallons of fuel liquids per year, consisting of:

(4) One (1) fractionator charge heater, identified as H-14301, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.46 MMBtu/hr, using no control and exhausting combustion products to stack Fractionator Heater.

(9) One (1) tower accumulator, identified as V-14301, discharging vapor to E-14304, liquids to tower T-14301, and wastewater to wastewater treatment.

(14) One (1) process fuel gas flash drum, identified as V-14303, discharging vapor to the process fuel gas header, and wastewater to wastewater treatment.

(j) One (1) Fulton Model ICX-30 boiler, identified as Fractionator Boiler, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 0.85 MMBtu/hr, using no control and exhausting combustion products to stack Boiler-1.

(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 2-8-4(1)]

D.2.1 BACT Limit [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following:

(a) The total emissions (process fuel gas) from the VMS fuel gas H_2S removal system shall be combusted in one or more of the following:

(1) FPS 1 dryer
(2) FPS 2 dryer
(3) FPS 1 Hot Oil Heater
(4) FPS 2 Hot Oil Heater
(5) Processors 1, 2, 3, 4, 5, & 7 (R-12001, R-22001, R-32001, R-42001, R-52001, R-72001)
(6) Hydrotreater heater (H-14101)
(7) Fractionator heater (H-14301)
(8) Fractionator Boiler
(9) Process Flare X-400 (PFD-16103)

(b) The control efficiency from the combustion of the process fuel gas shall not be less than 98% for each emissions unit.

(c) The VOC emissions from the combustion of process fuel gas shall not exceed 606 pounds of VOC per million standard cubic feet (lb/MMCF) of process fuel gas combusted.

D.2.2 FESOP and Prevention of Significant Deterioration (PSD) Minor Limitations (VOC and CO) [326 IAC 2-8] [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7 not applicable, the Permittee shall comply with the following:

(a) The VOC emissions from combustion of process fuel gas shall be less than 71.24 tons per tweve (12) consecutive month period, with compliance determined at the end of each month.

(b) The CO emissions from the following units shall not exceed the values in the table below, when the emission units are combusting 100% process fuel gas:

Emission Unit ID	CO Limit (lb/hr)
FPS 1 Dryer	1.72
FPS 2 Dryer	1.72
FPS 1 Hot Oil Heater	2.30
FPS 2 Hot Oil Heater	2.30
R-12001 (Processor 1)	2.30
R-22001 (Processor 2)	2.30
R-32001 (Processor 3)	2.30
R-42001 (Processor 4)	2.30
R-52001 (Processor 5)	2.30
R-72001 (Processor 7)	2.30
H-14101 (Hydrotreater heater)	0.54
H-14301 (Fractionator heater)	1.71
Fractionator Boiler	0.32

(1) No more than two (2) processors shall be in operation in Plastics Conversion Line 1 at any time.

(2) No more than two (2) processors shall be in operation in Plastics Conversion Line 2 at any time.

Compliance with the above VOC and CO emission limits, combined with the potential to emit VOC and CO from all other emission units at this source, shall limit the source-wide potential to emit of VOC and CO to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable.

D.2.3 HAP Minor Limits [40 CFR 63]

In order to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) When combusting process fuel gas the HAP emissions from the following units shall not exceed the emission limits in the table below:

Emission Unit ID	Benzene Limit (lb/hr)	Toluene Limit (lb/hr)
FPS 1 Dryer	0.12	8.10E-02
FPS 2 Dryer	0.12	8.10E-02
FPS 1 Hot Oil Heater	0.17	0.11
FPS 2 Hot Oil Heater	0.17	0.11
R-12001 (Processor 1)	0.17	0.11
R-22001 (Processor 2)	0.17	0.11
R-32001 (Processor 3)	0.17	0.11
R-42001 (Processor 4)	0.17	0.11
R-52001 (Processor 5)	0.17	0.11
R-72001 (Processor 7)	0.17	0.11
H-14101 (Hydrotreater heater)	3.90E-02	2.60E-02
H-14301 (Fractionator heater)	0.12	0.08
Fractionator Boiler	2.30E-02	1.50E-02

(1) No more than two (2) processors shall be in operation in Plastics Conversion Line 1 at any time.

(2) No more than two (2) processors shall be in operation in Plastics Conversion Line 2 at any time.

Compliance with the above HAP emission limits, combined with the potential to emit HAP from all other emission units at the source, shall limit HAP emissions from the entire source to less than ten (10) tons for any single HAP and twenty-five (25) tons for any combination of HAPS per twelve (12) consecutive month period and render this source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.2.4 Particulate Emission Limitations [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

Emission Unit	Unit ID	Pt (lb/MMBtu)
FPS 1 Hot Oil Heater	PCU 1, 2 & 5	0.37

Emission Unit	Unit ID	Pt (lb/MMBtu)
FPS 2 Hot Oil Heater	PCU 3, 4 & 7	0.37
Processor 1	R-12001	0.37
Processor 2	R-22001	0.37
Processor 3	R-32001	0.37
Processor 4	R-42001	0.37
Processor 5	R-52001	0.37
Processor 7	R-72001	0.37
Hydrotreater heater	H-14101	0.37
Fractionator heater	H-14301	0.37
Fractionator Boiler	-	0.37
SMR Heater	B-101	0.37

D.2.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements [326 IAC 2-8-4(1)]

D.2.6 VOC Control

In order to assure compliance with Condition D.2.2, all emissions from the below-listed processes shall be controlled by one or more of the below-listed control units for VOC control, which shall be in operation and control emissions from the Vapor Management System facility at all times the Vapor Management System facility is in operation.

Process ID	Process Description	Control ID
PCU 1, PCU 2, PCU 3, PCU 4, PCU 5, and/or PCU 7	Plastics conversion system	FPS 1 Dryer
		FPS 2 Dryer
		FPS 1 Hot Oil Heater
		FPS 2 Hot Oil Heater
		R-12001 (Processor 1)
		R-22001 (Processor 2)
		R-32001 (Processor 3)
		R-42001 (Processor 4)
		R-52001 (Processor 5)
		R-72001 (Processor 7)
		H-14101 (Hydrotreater heater)
		Fractionator Heater
		Fractionator Boiler
		Process Flare X-400 (PFD-16103)

D.2.7 VOC

In order to comply with Condition D.2.2(a), the Permittee shall determine VOC emissions according to the following formula:

$$E_V = \frac{Q \times 606 \frac{\text{lb VOC}}{\text{MMCF}}}{2{,}000 \frac{\text{lb}}{\text{ton}}}$$

Where E_V = Monthly VOC emissions, tons/month
Q = Monthly process fuel gas usage, MMCF/month

D.2.8 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.2.1(c) and D.2.2(b), not later than 180 days after the startup of each emission unit, the Permittee shall perform testing for VOC (lb/MMCF) and CO (lb/hr) utilizing methods approved by the commissioner. The tests must be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. This testing shall be conducted on the following emission units:

(1) FPS 1 Dryer,

(2) FPS 2 Dryer,

(3) FPS 1 Hot Oil Heater,

(4) FPS 2 Hot Oil Heater,

(5) R-12001 (Processor 1),

(6) R-22001 (Processor 2),

(7) R-32001 (Processor 3),

(8) R-42001 (Processor 4),

(9) R-52001 (Processor 5),

(10) R-72001 (Processor 7),

(11) H-14101 (Hydrotreater Heater),

(12) H-14301 (Fractionator Heater), and

(13) Fractionator Boiler

(b) Testing shall be conducted while each unit is burning 100% process fuel gas.

(c) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)]

D.2.9 Fuel Combustion Unit Temperature

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

(b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with limits in Conditions D.2.1 and D.2.2(a).

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

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

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.10 Record Keeping Requirement

(a) To document the compliance status with Condition D.2.2(a), the Permittee shall maintain records of the total amount of process fuel gas supplied to each unit that burns process fuel gas.

(b) To document the compliance status with Condition D.2.9, the Permittee shall maintain continuous temperature records for each fuel combustion unit that burns process fuel gas and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

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

D.2.11 Reporting Requirements

A monthly summary of the information to document the compliance status with Condition D.2.2 shall be submitted quarterly using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days following the end of the each calendar quarter. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting requirements of this permit. The report does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(l) One (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 (PFD-15501), constructed in 2020, with maximum loading rate of 600 gallons per minute and a limited annual throughput of 17,660,160 gallons of naphtha, controlled by thermal oxidizer X-311.

Under 40 CFR 61, Subpart BB, loading rack LR1 is an affected source.

(m) One (1) loading rack thermal oxidizer, identified as X-311 (PFD-15401), constructed in 2020, using electronic ignition.

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

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15211	IFR	Naphtha certified stream	127,200 (483)
15212	IFR	Naphtha certified stream	127,200 (483)

Notes:
1. IFR - internal floating roof

Under 40 CFR 60, Subpart Kb, the naphtha certified stream tanks (TK-15211 and TK-15212) are affected facilities.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 FESOP and Prevention of Significant Deterioration (PSD) VOC Minor Limitations [326 IAC 2-8] [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7 not applicable, the Permittee shall comply with the following:

(a) The VOC emissions from the thermal oxidizer, identified as X-311, shall not exceed 0.231 pounds per 1,000 gallons (lb/kgal) of naphtha loaded out.

(b) The one (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 shall be limited to a throughput of 17,660,160 gallons of naphtha per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above VOC emission limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide potential to emit of VOC to less than one hundred (100) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable.

D.3.2 HAP Minor Limits [40 CFR 63]

In order to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The HAP emissions from the thermal oxidizer, identified as X-311 shall not exceed the emission limits in the table below:

Hazardous Air Pollutant	Limit (lb/kgal)
Benzene	1.56E-02
Cumene	1.73E-03
Ethylbenzene	1.73E-03
n-Hexane	2.77E-02
Naphthalene	8.66E-03
Toluene	2.25E-02
2,2,4-Trimethylpentane	1.39E-02
Xylenes	8.66E-03

Compliance with the above HAP emission limits, combined with the potential to emit HAP from all other emission units at the source, shall limit HAP emissions from the entire source to less than ten (10) tons for any single HAP and twenty-five (25) tons for any combination of HAPS per twelve (12) consecutive month period and render this source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.3.3 Volatile Organic Compounds (VOC) [326 IAC 8-4-9]

(a) Pursuant to 326 IAC 8-4-9(b), the Permittee shall not allow a gasoline (naphtha) transport that is subject to 326 IAC 8-4-7 and that has a capacity of two thousand (2,000) gallons or more to be filled or emptied unless the gasoline transport complies with the requirements of 326 IAC 8-4-9(b)(1) and (2).

(b) Pursuant to 326 IAC 8-4-9(d), the Permittee shall:

(1) Design and operate the vapor balance system or vapor control system and the gasoline loading equipment in a manner that prevents:

(A) Gauge pressure from exceeding four thousand five hundred (4,500) pascals (eighteen (18) inches of H_2O) and a vacuum from exceeding one thousand five hundred (1,500) pascals (six (6) inches of H_2O) in the gasoline truck;

(B) A reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL, measured as propane) at two and five-tenths (2.5) centimeters from all points on the perimeter of a potential leak source when measured by a method approved by the commissioner during loading or unloading operations at gasoline bulk terminals; and

(C) Avoidable visible liquid leaks during loading or unloading operations at gasoline bulk terminals; and

(2) Within fifteen (15) days, repair and retest a vapor collection or control system that exceeds the limits in subdivision (1).

D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements [326 IAC 2-8-4(1)]

D.3.5 VOC and HAP Control

In order to assure compliance with Conditions D.3.1 and D.3.2, the thermal oxidizer, identified as X-311, for VOC control shall be in operation and control emissions from the one (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1, at all times the one (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1, is in operation.

D.3.6 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.1(a), not later than 180 days after the startup of the one (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1, the Permittee shall perform VOC testing of the thermal oxidizer, identified as X-311, utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.3.7 Flare Pilot Flame

In order to comply with Conditions D.3.1 and D.3.2, the Permittee shall continuously monitor the presence of a flare pilot flame for the thermal oxidizer, identified as X-311, using a thermocouple or any other equivalent device to detect the presence of a flame when the one (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1 is in operation.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.1(b), the Permittee shall maintain a monthly record of the naphtha loaded out in the one (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1.

(b) To document the compliance status with Condition D.3.3 (b), the Permittee shall maintain records of all certification testing. The records shall identify the following:

(1) The vapor balance, vapor collection, or vapor control system.

(2) The date of the test and, if applicable, retest.

(3) The results of the test and, if applicable, retest.

The records shall be maintained in a legible, readily available condition for at least two (2) years after the date the testing and, if applicable, retesting were completed.

(c) Pursuant to 326 IAC 8-4-3(a), the Permittee shall maintain records for the two (2) internal floating roof naphtha certified stream tanks, identified as Tank TK-15211 and TK-15212, including the following:

(1) the types of volatile petroleum liquids stored;
(2) the maximum true vapor pressure; and
(3) records of the inspections performed on the storage vessels.

(d) To document the compliance status with Condition D.3.7, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when the loading racks are in operation. The Permittee shall include in its records when the presence of a pilot flame is not detected and the reason for the lack of detection (e.g. the process did not operate that day).

(e) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping requirements of this permit.

D.3.9 Reporting Requirements

A monthly summary of the information to document the compliance status with Condition D.3.1(b), shall be submitted quarterly using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days following the end of the each calendar quarter. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting requirements of this permit. The report does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION E.1 NSPS

Emissions Unit Description:

Insignificant Activities:

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15211	IFR	Naphtha certified stream	127,200 (483)
15212	IFR	Naphtha certified stream	127,200 (483)

Notes:
1. IFR - internal floating roof

Under 40 CFR 60, Subpart Kb, the naphtha certified stream tanks (TK-15211 and TK-15212) are affected facilities.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.1.2 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 NSPS [326 IAC 12][40 CFR Part 60, Subpart Kb]

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

(1) 40 CFR 60.110b(a)
(2) 40 CFR 60.110b(b)
(3) 40 CFR 60.111b
(4) 40 CFR 60.112b(a)(1)
(5) 40 CFR 60.113b(a)
(6) 40 CFR 60.115b(a)
(7) 40 CFR 60.116b(a)
(8) 40 CFR 60.116b(b)
(9) 40 CFR 60.116b(c)
(10) 40 CFR 60.116b(e)
(11) 40 CFR 60.117b

SECTION E.2 NSPS

Emissions Unit Description:

(b) Three (3) Plastics Conversion Systems; identified as PCU 1 - North, PCU 2 - North, and PCU 5 - North; and collectively identified as Plastics Conversion Line 1, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(3) Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

Under 40 CFR 60, Subpart RRR, processors R-12001 and R-22001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-12001 and R-22001 are affected facilities.

(5) One (1) plastics-to-fuel processor, identified as R-52001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 5.

Under 40 CFR 60, Subpart RRR, processor R-52001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-52001 is an affected facility.

(d) Three (3) Plastics Conversion Systems; identified as PCU 3 - South, PCU 4 - South, and PCU 7 - South; and collectively identified as Plastics Conversion Line 2, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(3) Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

Under 40 CFR 60, Subpart RRR, processors R-32001 and R-42001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-32001 and R-42001 are affected facilities.

(5) One (1) plastics-to-fuel processor, identified as R-72001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks

Processor 7.

Under 40 CFR 60, Subpart RRR, processor R-72001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-72001 is an affected facility.

(e) One (1) Vapor Management System separating produced liquids from non-condensable vapor, consisting of:

(3) One (1) VMS and Hydrotreating Fuel Gas H_2S Removal System, identified as PFD-13201, constructed in 2020 and 2021, consisting of:

(B) One (1) hydrolysis reactor, identified as V-13201.

Under 40 CFR 60, Subpart RRR, V-13201 is an affected facility.

(D) Two (2) H_2S treaters operating in series, identified as V-13202A and V-13202B.

Under 40 CFR 60, Subpart RRR, V-13202A and V-13202B are affected facilities.

(f) One (1) Hydrotreater System, identified as PFD-14101, constructed in 2020 and 2021, with a maximum throughput of 2,016 gallons of fuel liquids per hour, consisting of:

(4) One (1) diolefins reactor, identified as R-14101.

Under 40 CFR 60, Subpart RRR, R-14101 is an affected facility.

(7) One (1) hydrotreater bed, identified as R-14102.

Under 40 CFR 60, Subpart RRR, R-14102 is an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.2.2 Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes NSPS [326 IAC 12][40 CFR Part 60, Subpart RRR]

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

(1) 40 CFR 60.700(a)
(2) 40 CFR 60.700(b)(3)
(3) 40 CFR 60.700(c)(2)
(4) 40 CFR 60.701
(5) 40 CFR 60.702(a)
(6) 40 CFR 60.703(c)
(7) 40 CFR 60.704(a)
(8) 40 CFR 60.704(b)
(9) 40 CFR 60.704(d)
(10) 40 CFR 60.704(e)
(11) 40 CFR 60.704(f)
(12) 40 CFR 60.705(a)
(13) 40 CFR 60.705(b)
(14) 40 CFR 60.705(c)
(15) 40 CFR 60.705(d)
(16) 40 CFR 60.705(k)
(17) 40 CFR 60.705(l)
(18) 40 CFR 60.705(m)
(19) 40 CFR 60.705(q)
(20) 40 CFR 60.705(s)
(21) 40 CFR 60.705(t)
(22) 40 CFR 60.706
(23) 40 CFR 60.707
(24) 40 CFR 60.708

SECTION E.3 NSPS

Emissions Unit Description:

(b) Three (3) Plastics Conversion Systems; identified as PCU 1 - North, PCU 2 - North, and PCU 5 - North; and collectively identified as Plastics Conversion Line 1, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(3) Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

Under 40 CFR 60, Subpart RRR, processors R-12001 and R-22001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-12001 and R-22001 are affected facilities.

(4) One (1) plastics-to-fuel processor, identified as R-52001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 5.

Under 40 CFR 60, Subpart RRR, processor R-52001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-52001 is an affected facility.

(d) Three (3) Plastics Conversion Systems; identified as PCU 3 - South, PCU 4 - South, and PCU 7 - South; and collectively identified as Plastics Conversion Line 2, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(3) Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

Under 40 CFR 60, Subpart RRR, processors R-32001 and R-42001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-32001 and R-42001 are affected facilities.

(4) One (1) plastics-to-fuel processor, identified as R-72001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of

6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 7.

Under 40 CFR 60, Subpart RRR, processor R-72001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-72001 is an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

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

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.3.2 Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001 NSPS [326 IAC 12][40 CFR Part 60, Subpart AAAA]

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

(1) 40 CFR 60.1000
(2) 40 CFR 60.1005
(3) 40 CFR 60.1010
(4) 40 CFR 60.1015
(5) 40 CFR 60.1020(h)
(6) 40 CFR 60.1030
(7) 40 CFR 60.1465

SECTION E.4 NSPS

Emissions Unit Description:

Insignificant Activities:

(b) Emergency generators as follows:

(1) Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

Under 40 CFR 60, Subpart IIII, the emergency generators are affected sources.

Under 40 CFR 63, Subpart ZZZZ, the emergency generator are new affected sources.

(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 2-8-4(1)]

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR Part 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12][40 CFR Part 60, Subpart IIII]

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

(1) 40 CFR 60.4200(a)(2)(i)
(2) 40 CFR 60.4200(c)
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207(b)
(6) 40 CFR 60.4208(a)
(7) 40 CFR 60.4209
(8) 40 CFR 60.4211(a)
(9) 40 CFR 60.4211(c)
(10) 40 CFR 60.4211(f)(1), (2)(i), (3)
(11) 40 CFR 60.4211(g)
(12) 40 CFR 60.4214(b)

(13) 40 CFR 60.4214(d)
(14) 40 CFR 60.4218
(15) 40 CFR 60.4219
(16) Table 8 to Subpart IIII of Part 60

SECTION E.5 NESHAP

Emissions Unit Description:

(l) One (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 (PFD-15501), constructed in 2020, with maximum loading rate of 600 gallons per minute and a limited annual throughput of 17,660,160 gallons of naphtha, controlled by thermal oxidizer X-311.

Under 40 CFR 61, Subpart BB, loading rack LR1 is an affected 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 2-8-4(1)]

E.5.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 61 [326 IAC 14-8-1] [40 CFR Part 61, Subpart A]

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 14-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 61, Subpart BB.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:
Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.5.2 National Emission Standard for Benzene Emissions From Benzene Transfer Operations NESHAP [40 CFR Part 63, Subpart BB] [326 IAC 14-8-1]

The Permittee shall comply with the following provisions of 40 CFR Part 61, Subpart BB (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 14-8-1, for the emission unit(s) listed above:

(1) 40 CFR 61.300(a)
(2) 40 CFR 61.300(b)
(3) 40 CFR 61.301
(4) 40 CFR 61.305(i)
(5) 40 CFR 61.306

SECTION E.6 NESHAP

Emissions Unit Description:

Insignificant Activities:

(b) Emergency generators as follows:

(1) Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

Under 40 CFR 60, Subpart IIII, the emergency generators are affected sources.

Under 40 CFR 63, Subpart ZZZZ, the emergency generator are new affected sources.

(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 2-8-4(1)]

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

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

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

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

E.6.2 National Emission Standards for Hazardous Air Pollutants for 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 (included as Attachment F to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: W 800 S, Ashley, Indiana 46705
FESOP Permit No.: F151-43439-00067

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:

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: W 800 S, Ashley, Indiana 46705
FESOP Permit No.: F151-43439-00067

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

□ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-8-12

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 Describe:
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

FESOP Quarterly Report

Source Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: W 800 S, Ashley, Indiana 46705
FESOP Permit No.: F151-43439-00067
Facility: Process heating
Parameter: Process fuel gas combustion
Limit: The VOC emissions from combustion of process fuel gas shall not exceed 71.24 tons per tweve (12) consecutive month period, with compliance determined at the end of each month calculated using the formula in Condition D.2.7

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

FESOP Quarterly Report

Source Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: W 800 S, Ashley, Indiana 46705
FESOP Permit No.: F151-43439-00067
Facility: one (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 (PFD-15501).
Parameter: Naphtha throughput
Limit: The one (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 shall be limited to a combined throughput of 70,640,640 gallons of naphtha per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

☐ 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
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: W 800 S, Ashley, Indiana 46705
FESOP Permit No.: F151-43439-00067

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 A

Federally Enforceable State Operating Permit (FESOP) No: 151-43439-00067

[Downloaded from the eCFR on January 25, 2021]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

SOURCE: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance*—(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g)

still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(5) *Option to comply with part 63, subpart WW, of this chapter.* Except as specified in paragraphs (e)(5)(i) through (iv) of this section, owners or operators may choose to comply with 40 CFR part 63, subpart WW, to satisfy the requirements of §§60.112b through 60.117b for storage vessels either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa, or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa.

(i) The general provisions in subpart A of this part apply instead of the general provisions in subpart A of part 63 of this chapter.

(ii) Where terms are defined in both this subpart and 40 CFR part 63, subpart WW, the definitions in this subpart apply.

(iii) Owners or operators who choose to comply with 40 CFR part 63, subpart WW, also must comply with the monitoring requirements of §60.116b(a), (c), (e), and (f)(1), except as specified in paragraphs (e)(5)(iii)(A) through (C) of this section.

(A) The reference to all records applies only to the records required by §60.116b(c);

(B) The reference to §60.116b(b) does not apply; and

(C) The reference to §60.116b(g) does not apply.

(iv) Owners or operators who choose to comply with 40 CFR part 63, subpart WW, must also keep records and furnish reports as specified in paragraphs (e)(5)(iv)(A) through (F) of this section.

(A) For each affected facility, the owner or operator must notify the Administrator at least 30 days before the first inspection is conducted under 40 CFR part 63, subpart WW. After this notification is submitted to the Administrator, the owner or operator must continue to comply with the alternative standard described in this paragraph (e)(5) until the owner or operator submits another notification to the Administrator indicating the affected facility is using the requirements of §§60.112b through 60.117b instead of the alternative standard described in this

paragraph (e)(5). The compliance schedule for events does not reset upon switching between compliance with this subpart and 40 CFR part 63, subpart WW.

(B) Keep a record of each affected facility using the alternative standard described in this paragraph (e)(5) when conducting an inspection required by §63.1063(c)(1) of this chapter.

(C) Keep a record of each affected facility using the alternative standard described in this paragraph (e)(5) when conducting an inspection required by §63.1063(c)(2) of this chapter.

(D) Copies of all records and reports kept pursuant to §60.115b(a) and (b) that have not met the 2-year record retention required by the introductory text of §60.115b must be kept for an additional 2 years after the date of submittal of the inspection notification specified in paragraph (e)(5)(iv)(A) of this section, indicating the affected facility is using the requirements of 40 CFR part 63, subpart WW.

(E) Copies of all records and reports kept pursuant to §63.1065 of this chapter that have not met the 5-year record retention required by the introductory text of §63.1065 must be kept for an additional 5 years after the date of submittal of the notification specified in paragraph (e)(5)(iv)(A) of this section, indicating the affected facility is using the requirements of §§60.112b through 60.117b.

(F) The following exceptions to the reporting requirements of §63.1066 of this chapter apply:

(*1*) The notification of initial startup required under §63.1066(a)(1) and (2) of this chapter must be submitted as an attachment to the notification required by §§60.7(a)(3) and 60.115b(a)(1);

(*2*) The reference in §63.1066(b)(2) of this chapter to periodic reports “when inspection failures occur” means to submit inspections results within 60 days of the initial gap measurements required by §63.1063(c)(2)(i) of this chapter and within 30 days of all other inspections required by §63.1063(c)(1) and (2) of this chapter.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003; 86 FR 5019, Jan. 19, 2021]

§60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local

maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323-82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in §60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in §60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in §60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in §60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”).

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with

the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was

unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet §60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of §60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in §60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, §60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b.

§60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §60.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §60.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(2) and §60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by §60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by §60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by §60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with §60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with §60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by §60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by §60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under §60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

[52 FR 11429, Apr. 8, 1987, as amended at 86 FR 5019, Jan. 19, 2021]

§60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17); or

(ii) ASTM D323-82 or 94 (incorporated by reference—see §60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

Attachment B

Federally Enforceable State Operating Permit (FESOP) No: 151-43439-00067

[Downloaded from the eCFR on May 7, 2015]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart RR—Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations

SOURCE: 48 FR 48375, Oct. 18, 1983, unless otherwise noted.

§60.440 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each coating line used in the manufacture of pressure sensitive tape and label materials.

(b) Any affected facility which inputs to the coating process 45 Mg (50 tons) of VOC or less per 12 month period is not subject to the emission limits of §60.442(a), however, the affected facility is subject to the requirements of all other applicable sections of this subpart. If the amount of VOC input exceeds 45 Mg (50 tons) per 12 month period, the coating line will become subject to §60.442(a) and all other sections of this subpart.

(c) This subpart applies to any affected facility which begins construction, modification, or reconstruction after December 30, 1980.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§60.441 Definitions and symbols.

(a) Except as otherwise required by the context, terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Coating applicator means an apparatus used to apply a surface coating to a continuous web.

Coating line means any number or combination of adhesive, release, or precoat coating applicators, flashoff areas, and ovens which coat a continuous web, located between a web unwind station and a web rewind station, to produce pressure sensitive tape and label materials.

Coating solids applied means the solids content of the coated adhesive, release, or precoat as measured by Method 24.

Flashoff area means the portion of a coating line after the coating applicator and usually before the oven entrance.

Fugitive volatile organic compounds means any volatile organic compounds which are emitted from the coating applicator and flashoff areas and are not emitted in the oven.

Hood or enclosure means any device used to capture fugitive volatile organic compounds.

Oven means a chamber which uses heat or irradiation to bake, cure, polymerize, or dry a surface coating.

Precoat means a coating operation in which a coating other than an adhesive or release is applied to a surface during the production of a pressure sensitive tape or label product.

Solvent applied in the coating means all organic solvent contained in the adhesive, release, and precoat formulations that is metered into the coating applicator from the formulation area.

Total enclosure means a structure or building around the coating applicator and flashoff area or the entire coating line for the purpose of confining and totally capturing fugitive VOC emissions.

VOC means volatile organic compound.

(b) All symbols used in this subpart not defined below are given meaning in the Act or in subpart A of this part.

a=the gas stream vents exiting the emission control device.

b=the gas stream vents entering the emission control device.

C_{aj} = the concentration of VOC (carbon equivalent) in each gas stream (j) exiting the emission control device, in parts per million by volume.

C_{bi} = the concentration of VOC (carbon equivalent) in each gas stream (i) entering the emission control device, in parts per million by volume.

C_{fk} = the concentration of VOC (carbon equivalent) in each gas stream (k) emitted directly to the atmosphere, in parts per million by volume.

G=the calculated weighted average mass (kg) of VOC per mass (kg) of coating solids applied each calendar month.

M_{ci} = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records.

M_r = the total mass (kg) of solvent recovered for a calendar month.

Q_{aj} = the volumetric flow rate of each effluent gas stream (j) exiting the emission control device, in dry standard cubic meters per hour.

Q_{bi} = the volumetric flow rate of each effluent gas stream (i) entering the emission control device, in dry standard cubic meters per hour.

Q_{fk} = the volumetric flow rate of each effluent gas stream (k) emitted to the atmosphere, in dry standard cubic meters per hour.

R=the overall VOC emission reduction achieved for a calendar month (in percent).

R_q = the required overall VOC emission reduction (in percent).

W_{oi} = the weight fraction of organics applied of each coating (i) applied during a calendar month as determined from Method 24 or coating manufacturer's formulation data.

W_{si} = the weight fraction of solids applied of each coating (i) applied during a calendar month as determined from Method 24 or coating manufacturer's formulation data.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§60.442 Standard for volatile organic compounds.

(a) On and after the date on which the performance test required by §60.8 has been completed each owner or operator subject to this subpart shall:

(1) Cause the discharge into the atmosphere from an affected facility not more than 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month; or

(2) Demonstrate for each affected facility;

(i) A 90 percent overall VOC emission reduction as calculated over a calendar month; or

(ii) The percent overall VOC emission reduction specified in §60.443(b) as calculated over a calendar month.

§60.443 Compliance provisions.

(a) To determine compliance with §60.442 the owner or operator of the affected facility shall calculate a weighted average of the mass of solvent used per mass of coating solids applied for a one calendar month period according to the following procedures:

(1) Determine the weight fraction of organics and the weight fraction of solids of each coating applied by using Reference Method 24 or by the coating manufacturer's formulation data.

(2) Compute the weighted average by the following equation:

$$G = \frac{\sum_{i=1}^{n} W_{oi} M_{ci}}{\sum_{i=1}^{n} W_{si} M_{ci}}$$

(3) For each affected facility where the value of G is less than or equal to 0.20 kg VOC per kg of coating solids applied, the affected facility is in compliance with §60.442(a)(1).

(b) To determine compliance with §60.442(a)(2), the owner or operator shall calculate the required overall VOC emission reduction according to the following equation:

$$R_q = \frac{G - 0.20}{G} \times 100$$

If R_q is less than or equal to 90 percent, then the required overall VOC emission reduction is R_q. If R_q is greater than 90 percent, then the required overall VOC emission reduction is 90 percent.

(c) Where compliance with the emission limits specified in §60.442(a)(2) is achieved through the use of a solvent recovery system, the owner or operator shall determine the overall VOC emission reduction for a one calendar month period by the following equation:

$$R = \sum_{i=1}^{n} \frac{M_r}{W_{oi} M_{ci}} \times 100$$

If the R value is equal to or greater than the R_q value specified in paragraph (b) of this section, then compliance with §60.442(a)(2) is demonstrated.

(d) Where compliance with the emission limit specified in §60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall determine calendar monthly compliance by comparing the monthly required overall VOC emission reduction specified in paragraph (b) of this section to the overall VOC emission reduction demonstrated in the most recent performance test which complied with §60.442(a)(2). If the monthly required overall VOC emission reduction is less than or equal to the overall VOC reduction of the most recent performance test, the affected facility is in compliance with §60.442(a)(2).

(e) Where compliance with §60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall continuously record the destruction device combustion temperature during coating operations for thermal incineration destruction devices or the gas temperature upstream and downstream of the incinerator catalyst bed during coating operations for catalytic incineration destruction devices. For thermal incineration destruction devices the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device is more than 28 °C (50 °F) below the average temperature of the device during the most recent performance test complying with §60.442(a)(2). For catalytic incineration destruction devices, the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device immediately before the catalyst bed is more than 28 °C (50 °F) below the average temperature of the device during the most recent performance test complying with §60.442(a)(2), and all 3-hour periods (during actual coating operations) during which the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the device during the most recent performance test complying with §60.442(a)(2).

(f) After the initial performance test required for all affected facilities under §60.8, compliance with the VOC emission limitation and percentage reduction requirements under §60.442 is based on the average emission reduction for one calendar month. A separate compliance test is completed at the end of each calendar month after the initial performance test, and a new calendar month's average VOC emission reduction is calculated to show compliance with the standard.

(g) If a common emission control device is used to recover or destroy solvent from more than one affected facility, the performance of that control device is assumed to be equal for each of the affected facilities. Compliance with §60.442(a)(2) is determined by the methods specified in paragraphs (c) and (d) of this section and is performed simultaneously on all affected facilities.

(h) If a common emission control device is used to recover solvent from an existing facility (or facilities) as well as from an affected facility (or facilities), the overall VOC emission reduction for the affected facility (or facilities), for the purpose of compliance, shall be determined by the following procedures:

(1) The owner or operator of the existing facility (or facilities) shall determine the mass of solvent recovered for a calendar month period from the existing facility (or facilities) prior to the connection of the affected facility (or facilities) to the emission control device.

(2) The affected facility (or facilities) shall then be connected to the emission control device.

(3) The owner or operator shall determine the total mass of solvent recovered from both the existing and affected facilities over a calendar month period. The mass of solvent determined in paragraph (h)(1) of this section from the existing facility shall be subtracted from the total mass of recovered solvent to obtain the mass of solvent recovered from the affected facility (or facilities). The overall VOC emission reduction of the affected facility (or facilities) can then be determined as specified in paragraph (c) of this section.

(i) If a common emission control device(s) is used to destruct solvent from an existing facility (or facilities) as well as from an affected facility (or facilities), the overall VOC emission reduction for the affected facility (or facilities), for the purpose of compliance, shall be determined by the following procedures:

(1) The owner or operator shall operate the emission control device with both the existing and affected facilities connected.

(2) The concentration of VOC (in parts per million by volume) after the common emission control device shall be determined as specified in §60.444(c). This concentration is used in the calculation of compliance for both the existing and affected facilities.

(3) The volumetric flow out of the common control device attributable to the affected facility (or facilities) shall be calculated by first determining the ratio of the volumetric flow entering the common control device attributable to the affected facility (facilities) to the total volumetric flow entering the common control device from both existing and affected facilities. The multiplication of this ratio by the total volumetric flow out of the common control device yields the flow attributable to the affected facility (facilities). Compliance is determined by the use of the equation specified in §60.444(c).

(j) Startups and shutdowns are normal operation for this source category. Emissions from these operations are to be included when determining if the standard specified at §60.442(a)(2) is being attained.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§60.444 Performance test procedures.

(a) The performance test for affected facilities complying with §60.442 without the use of add-on controls shall be identical to the procedures specified in §60.443(a).

(b) The performance test for affected facilities controlled by a solvent recovery device shall be conducted as follows:

(1) The performance test shall be a one calendar month test and not the average of three runs as specified in §60.8(f).

(2) The weighted average mass of VOC per mass of coating solids applied for a one calendar month period shall be determined as specified in §60.443(a) (1) and (2).

(3) Calculate the required percent overall VOC emission reduction as specified in §60.443(b).

(4) Inventory VOC usage and VOC recovery for a one calendar month period.

(5) Determine the percent overall VOC emission reduction as specified in §60.443(c).

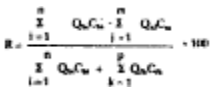
(c) The performance test for affected facilities controlled by a solvent destruction device shall be conducted as follows:

(1) The performance of the solvent destruction device shall be determined by averaging the results of three test runs as specified in §60.8(f).

(2) Determine for each affected facility prior to each test run the weighted average mass of VOC per mass of coating solids applied being used at the facility. The weighted average shall be determined as specified in §60.443(a). In this application the quantities of W_{oi}, W_{si}, and M_{ci} shall be determined for the time period of each test run and not a calendar month as specified in §60.441.

(3) Calculate the required percent overall VOC emission reduction as specified in §60.443(b).

(4) Determine the percent overall VOC emission reduction of the solvent destruction device by the following equation and procedures:



(i) The owner or operator of the affected facility shall construct the overall VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in §60.446(b).

(ii) The owner or operator of an affected facility shall construct a temporary total enclosure around the coating line applicator and flashoff area during the performance test for the purpose of capturing fugitive VOC emissions. If a permanent total enclosure exists in the affected facility prior to the performance test and the Administrator is satisfied that the enclosure is totally capturing fugitive VOC emissions, then no additional total enclosure will be required for the performance test.

(iii) For each affected facility where the value of R is greater than or equal to the value of R_q calculated in §60.443(b), compliance with §60.442(a)(2) is demonstrated.

§60.445 Monitoring of operations and recordkeeping.

(a) The owner or operator of an affected facility subject to this subpart shall maintain a calendar month record of all coatings used and the results of the reference test method specified in §60.446(a) or the manufacturer's formulation data used for determining the VOC content of those coatings.

(b) The owner or operator of an affected facility controlled by a solvent recovery device shall maintain a calendar month record of the amount of solvent applied in the coating at each affected facility.

(c) The owner or operator of an affected facility controlled by a solvent recovery device shall install, calibrate, maintain, and operate a monitoring device for indicating the cumulative amount of solvent recovered by the device over a calendar month period. The monitoring device shall be accurate within ±2.0 percent. The owner or operator shall maintain a calendar month record of the amount of solvent recovered by the device.

(d) The owner or operator of an affected facility operating at the conditions specified in §60.440(b) shall maintain a 12 month record of the amount of solvent applied in the coating at the facility.

(e) The owner or operator of an affected facility controlled by a thermal incineration solvent destruction device shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the temperature of the solvent destruction device's exhaust gases. The monitoring device shall have an accuracy of the greater of ±0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5 °C.

(f) The owner or operator of an affected facility controlled by a catalytic incineration solvent destruction device shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the gas temperature both upstream and downstream of the catalyst bed.

(g) The owner or operator of an affected facility controlled by a solvent destruction device which uses a hood or enclosure to capture fugitive VOC emissions shall install, calibrate, maintain, and operate a monitoring device which continuously indicates that the hood or enclosure is operating. No continuous monitor shall be required if the owner or operator can demonstrate that the hood or enclosure system is interlocked with the affected facility's oven recirculation air system.

(h) Records of the measurements required in §§60.443 and 60.445 must be retained for at least two years following the date of the measurements.

§60.446 Test methods and procedures.

(a) The VOC content per unit of coating solids applied and compliance with §60.422(a)(1) shall be determined by either Method 24 and the equations specified in §60.443 or by manufacturers' formulation data. In the event of any inconsistency between a Method 24 test and manufacturers' formulation data, the Method 24 test will govern. The Administrator may require an owner or operator to perform Method 24 tests during such months as he deems appropriate. For Method 24, the coating sample must be a one liter sample taken into a one liter container at a point where the sample will be representative of the coating applied to the web substrate.

(b) Method 25 shall be used to determine the VOC concentration, in parts per million by volume, of each effluent gas stream entering and exiting the solvent destruction device or its equivalent, and each effluent gas stream emitted directly to the atmosphere. Methods 1, 2, 3, and 4 shall be used to determine the sampling location, volumetric flowrate, molecular weight, and moisture of all sampled gas streams. For Method 25, the sampling time for each of three runs must be at least 1 hour. The minimum sampling volume must be 0.003 dscm except that shorter sampling

times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator.

(c) If the owner or operator can demonstrate to the Administrator's satisfaction that testing of representative stacks yields results comparable to those that would be obtained by testing all stacks, the Administrator will approve testing of representative stacks on a case-by-case basis.

[48 FR 48375, Oct. 18, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

§60.447 Reporting requirements.

(a) For all affected facilities subject to compliance with §60.442, the performance test data and results from the performance test shall be submitted to the Administrator as specified in §60.8(a) of the General Provisions (40 CFR part 60, subpart A).

(b) Following the initial performance test, the owner or operator of each affected facility shall submit quarterly reports to the Administrator of exceedances of the VOC emission limits specified in §60.442. If no such exceedances occur during a particular quarter, a report stating this shall be submitted to the Administrator semiannually.

(c) The owner or operator of each affected facility shall also submit reports at the frequency specified in §60.7(c) when the incinerator temperature drops as defined under §60.443(e). If no such periods occur, the owner or operator shall state this in the report.

(d) The requirements of this subsection remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this subsection, provided that they comply with the requirements established by the State.

[48 FR 48375, Oct. 18, 1983, as amended at 55 FR 51383, Dec. 13, 1990]

Attachment C

Federally Enforceable State Operating Permit (FESOP) No: 151-43439-00067

[Downloaded from the eCFR on January 29, 2016]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart AAAA—Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001

Source: 65 FR 76355, Dec. 6, 2000, unless otherwise noted.

Introduction

§60.1000 What does this subpart do?

This subpart establishes new source performance standards for new small municipal waste combustion units.

§60.1005 When does this subpart become effective?

This subpart takes effect June 6, 2001. Some of the requirements in this subpart apply to municipal waste combustion unit planning and must be completed before construction is commenced on the municipal waste combustion unit. In particular, the preconstruction requirements in §§60.1050 through 60.1150 must be completed prior to commencing construction. Other requirements (such as the emission limits) apply when the municipal waste combustion unit begins operation.

Applicability

§60.1010 Does this subpart apply to my municipal waste combustion unit?

Yes, if your municipal waste combustion unit meets two criteria:

(a) Your municipal waste combustion unit is a new municipal waste combustion unit.

(b) Your municipal waste combustion unit has the capacity to combust at least 35 tons per day but no more than 250 tons per day of municipal solid waste or refuse-derived fuel.

§60.1015 What is a new municipal waste combustion unit?

(a) A new municipal waste combustion unit is a municipal waste combustion unit that meets either of two criteria:

(1) Commenced construction after August 30, 1999.

(2) Commenced reconstruction or modification after June 6, 2001.

(b) This subpart does not apply to your municipal waste combustion unit if you make physical or operational changes to an existing municipal waste combustion unit primarily to comply with the emission guidelines in subpart BBBB of this part. Such changes do not qualify as reconstruction or modification under this subpart.

§60.1020 Does this subpart allow any exemptions?

(a) Small municipal waste combustion units that combust less than 11 tons per day. You are exempt from this subpart if you meet four requirements:

(1) Your municipal waste combustion unit is subject to a federally enforceable permit limiting the amount of municipal solid waste combusted to less than 11 tons per day.

(2) You notify the Administrator that the unit qualifies for the exemption.

(3) You provide the Administrator with a copy of the federally enforceable permit.

(4) You keep daily records of the amount of municipal solid waste combusted.

(b) Small power production facilities. You are exempt from this subpart if you meet four requirements:

(1) Your unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) Your unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity.

(3) You notify the Administrator that the unit qualifies for the exemption.

(4) You provide the Administrator with documentation that the unit qualifies for the exemption.

(c) Cogeneration facilities. You are exempt from this subpart if you meet four requirements:

(1) Your unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) Your unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You notify the Administrator that the unit qualifies for the exemption.

(4) You provide the Administrator with documentation that the unit qualifies for the exemption.

(d) Municipal waste combustion units that combust only tires. You are exempt from this subpart if you meet three requirements:

(1) Your municipal waste combustion unit combusts a single-item waste stream of tires and no other municipal waste (the unit can co-fire coal, fuel oil, natural gas, or other nonmunicipal solid waste).

(2) You notify the Administrator that the unit qualifies for the exemption.

(3) You provide the Administrator with documentation that the unit qualifies for the exemption.

(e) Hazardous waste combustion units. You are exempt from this subpart if you get a permit for your unit under section 3005 of the Solid Waste Disposal Act.

(f) Materials recovery units. You are exempt from this subpart if your unit combusts waste mainly to recover metals. Primary and secondary smelters qualify for the exemption.

(g) Co-fired combustors. You are exempt from this subpart if you meet four requirements:

(1) Your unit has a federally enforceable permit limiting the combustion of municipal solid waste to 30 percent of the total fuel input by weight.

(2) You notify the Administrator that the unit qualifies for the exemption.

(3) You provide the Administrator with a copy of the federally enforceable permit.

(4) You record the weights, each quarter, of municipal solid waste and of all other fuels combusted.

(h) Plastics/rubber recycling units. You are exempt from this subpart if you meet four requirements:

(1) Your pyrolysis/combustion unit is an integrated part of a plastics/rubber recycling unit as defined under "Definitions" (§60.1465).

(2) You record the weights, each quarter, of plastics, rubber, and rubber tires processed.

(3) You record the weights, each quarter, of feed stocks produced and marketed from chemical plants and petroleum refineries.

(4) You keep the name and address of the purchaser of those feed stocks.

(i) Units that combust fuels made from products of plastics/rubber recycling plants. You are exempt from this subpart if you meet two requirements:

(1) Your unit combusts gasoline, diesel fuel, jet fuel, fuel oils, residual oil, refinery gas, petroleum coke, liquified petroleum gas, propane, or butane produced by chemical plants or petroleum refineries that use feedstocks produced by plastics/rubber recycling units.

(2) Your unit does not combust any other municipal solid waste.

(j) Cement kilns. You are exempt from this subpart if your cement kiln combusts municipal solid waste.

(k) Air curtain incinerators. If your air curtain incinerator (see §60.1465 for definition) combusts 100 percent yard waste, you must meet only the requirements under "Air Curtain Incinerators That Burn 100 Percent Yard Waste" (§§60.1435 through 60.1455).

§60.1025 Do subpart E new source performance standards also apply to my municipal waste combustion unit?

If this subpart AAAA applies to your municipal waste combustion unit, then subpart E of this part does not apply to your municipal waste combustion unit.

§60.1030 Can the Administrator delegate authority to enforce these Federal new source performance standards to a State agency?

Yes, the Administrator can delegate all authorities in all sections of this subpart to the State for direct State enforcement.

§60.1035 How are these new source performance standards structured?

These new source performance standards contain five major components:

(a) Preconstruction requirements.

(1) Materials separation plan.

(2) Siting analysis.

(b) Good combustion practices.

(1) Operator training.

(2) Operator certification.

(3) Operating requirements.

(c) Emission limits.

(d) Monitoring and stack testing.

(e) Recordkeeping and reporting.

§60.1040 Do all five components of these new source performance standards apply at the same time?

No, you must meet the preconstruction requirements before you commence construction of the municipal waste combustion unit. After the municipal waste combustion unit begins operation, you must meet all of the good combustion practices, emission limits, monitoring, stack testing, and most recordkeeping and reporting requirements.

§60.1045 Are there different subcategories of small municipal waste combustion units within this subpart?

(a) Yes, this subpart subcategorizes small municipal waste combustion units into two groups based on the aggregate capacity of the municipal waste combustion plant as follows:

(1) *Class I Units.* Class I units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. (See the definition of “municipal waste combustion plant capacity” in §60.1465 for specification of which units at a plant are included in the aggregate capacity calculation.)

(2) *Class II Units.* Class II units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. (See the definition of “municipal waste combustion plant capacity” in §60.1465 for specification of which units at a plant are included in the aggregate capacity calculation.)

(b) The requirements for Class I and Class II units are identical except for two items:

(1) Class I units have a nitrogen oxides emission limit. Class II units do not have a nitrogen oxides emission limit (see table 1 of this subpart). Additionally, Class I units have continuous emission monitoring, recordkeeping, and reporting requirements for nitrogen oxides.

(2) Class II units are eligible for the reduced testing option provided in §60.1305.

Preconstruction Requirements: Materials Separation Plan

§60.1050 Who must submit a materials separation plan?

(a) You must prepare a materials separation plan for your municipal waste combustion unit if you commence construction of a new small municipal waste combustion unit after December 6, 2000.

(b) If you commence construction of your municipal waste combustion unit after August 30, 1999 but before December 6, 2000, you are not required to prepare the materials separation plan specified in this subpart.

(c) You must prepare a materials separation plan if you are required to submit an initial application for a construction permit, under 40 CFR part 51, subpart I, or part 52, as applicable, for the reconstruction or modification of your municipal waste combustion unit.

§60.1055 What is a materials separation plan?

The plan identifies a goal and an approach for separating certain components of municipal solid waste for a given service area prior to waste combustion and making them available for recycling.

§60.1060 What steps must I complete for my materials separation plan?

(a) For your materials separation plan, you must complete nine steps:

(1) Prepare a draft materials separation plan.

(2) Make your draft plan available to the public.

(3) Hold a public meeting on your draft plan.

(4) Prepare responses to public comments received during the public comment period on your draft plan.

(5) Prepare a revised materials separation plan.

(6) Discuss the revised plan at the public meeting for review of the siting analysis.

(7) Prepare responses to public comments received on your revised plan.

(8) Prepare a final materials separation plan.

(9) Submit the final materials separation plan.

(b) You may use analyses conducted under the requirements of 40 CFR part 51, subpart I, or part 52, to comply with some of the materials separation requirements of this subpart.

§60.1065 What must I include in my draft materials separation plan?

(a) You must prepare and submit a draft materials separation plan for your municipal waste combustion unit and its service area.

(b) Your draft materials separation plan must identify a goal and an approach for separating certain components of municipal solid waste for a given service area prior to waste combustion and making them available for recycling. A materials separation plan may include such elements as dropoff facilities, buy-back or deposit-return incentives, programs for curbside pickup, and centralized systems for mechanical separation.

(c) Your materials separation plan may include different goals or approaches for different subareas in the service area.

(d) Your materials separation plan may exclude materials separation activities for certain subareas or, if warranted, the entire service area.

§60.1070 How do I make my draft materials separation plan available to the public?

(a) Distribute your draft materials separation plan to the main public libraries in the area where you will construct the municipal waste combustion unit.

(b) Publish a notice of a public meeting in the main newspapers that serve two areas:

(1) The area where you will construct the municipal waste combustion unit.

(2) The areas where the waste that your municipal waste combustion unit combusts will be collected.

(c) Include six items in your notice of the public meeting:

(1) The date of the public meeting.

(2) The time of the public meeting.

(3) The location of the public meeting.

(4) The location of the public libraries where the public can find your materials separation plan. Include the normal business hours of each library.

(5) An agenda of the topics that will be discussed at the public meeting.

(6) The beginning and ending dates of the public comment period on your draft materials separation plan.

§60.1075 When must I accept comments on the materials separation plan?

(a) You must accept verbal comments at the public meeting.

(b) You must accept written comments anytime during the period that begins on the date the document is distributed to the main public libraries and ends 30 days after the date of the public meeting.

§60.1080 Where and when must I hold a public meeting on my draft materials separation plan?

(a) You must hold a public meeting and accept comments on your draft materials separation plan.

(b) You must hold the public meeting in the county where you will construct the municipal waste combustion unit.

(c) You must schedule the public meeting to occur at least 30 days after you make your draft materials separation plan available to the public.

(d) You may combine the public meeting with any other public meeting required as part of any other Federal, State, or local permit review. However, you may not combine it with the public meeting required for the siting analysis under “Preconstruction Requirements: Siting Analysis” (§60.1140).

(e) You are encouraged to address eight topics at the public meeting for your draft materials separation plan:

(1) Expected size of the service area for your municipal waste combustion unit.

(2) Amount of waste you will collect in the service area.

(3) Types and estimated amounts of materials proposed for separation.

(4) Methods proposed for materials separation.

(5) Amount of residual waste for disposal.

(6) Alternate disposal methods for handling the residual waste.

(7) Where your responses to public comments on the draft materials separation plan will be available for inspection.

(8) Where your revised materials separation plan will be available for inspection.

(f) You must prepare a transcript of the public meeting on your draft materials separation plan.

§60.1085 What must I do with any public comments I receive during the public comment period on my draft materials separation plan?

You must do three steps:

(a) Prepare written responses to any public comments you received during the public comment period. Summarize the responses to public comments in a document that is separate from your revised materials separation plan.

(b) Make the comment response document available to the public in the service area where you will construct your municipal waste combustion unit. You must distribute the document at least to the main public libraries used to announce the public meeting.

(c) Prepare a revised materials separation plan for the municipal waste combustion unit that includes, as appropriate, changes made in response to any public comments you received during the public comment period.

§60.1090 What must I do with my revised materials separation plan?

You must do two tasks:

(a) As specified under “Reporting” (§60.1375), submit five items to the Administrator by the date you submit the application for a construction permit under 40 CFR part 51, subpart I, or part 52. (If you are not required to submit an application for a construction permit under 40 CFR part 51, subpart I, or part 52, submit five items to the Administrator by the date of your notice of construction under §60.1380):

(1) Your draft materials separation plan.

(2) Your revised materials separation plan.

(3) Your notice of the public meeting for your draft materials separation plan.

(4) A transcript of the public meeting on your draft materials separation plan.

(5) The document that summarizes your responses to the public comments you received during the public comment period on your draft materials separation plan.

(b) Make your revised materials separation plan available to the public as part of the siting analysis procedures under “Preconstruction Requirements: Siting Analysis” (§60.1130).

§60.1095 What must I include in the public meeting on my revised materials separation plan?

As part of the public meeting for review of the siting analysis, as specified under “Preconstruction Requirements: Siting Analysis” (§60.1140), you must discuss two areas:

(a) Differences between your revised materials separation plan and your draft materials separation plan discussed at the first public meeting (§60.1080).

(b) Questions about your revised materials separation plan.

§60.1100 What must I do with any public comments I receive on my revised materials separation plan?

(a) Prepare written responses to any public comments and include them in the document that summarizes your responses to public comments on the siting analysis.

(b) Prepare a final materials separation plan that includes, as appropriate, changes made in response to any public comments you received on your revised materials separation plan.

§60.1105 How do I submit my final materials separation plan?

As specified under “Reporting” (§60.1380), submit your final materials separation plan to the Administrator as part of the notice of construction for the municipal waste combustion unit.

Preconstruction Requirements: Siting Analysis

§60.1110 Who must submit a siting analysis?

(a) You must prepare a siting analysis if you commence construction of a small municipal waste combustion unit after December 6, 2000.

(b) If you commence construction on your municipal waste combustion unit after August 30, 1999, but before December 6, 2000, you are not required to prepare the siting analysis specified in this subpart.

(c) You must prepare a siting analysis if you are required to submit an initial application for a construction permit, under 40 CFR part 51, subpart I, or part 52, as applicable, for the reconstruction or modification of your municipal waste combustion unit.

§60.1115 What is a siting analysis?

The siting analysis addresses how your municipal waste combustion unit affects ambient air quality, visibility, soils, vegetation, and other relevant factors. The analysis can be used to determine whether the benefits of your proposed facility significantly outweigh the environmental and social costs resulting from its location and construction. The analysis must also consider other major industrial facilities near the proposed site.

§60.1120 What steps must I complete for my siting analysis?

(a) For your siting analysis, you must complete five steps:

(1) Prepare an analysis.

(2) Make your analysis available to the public.

(3) Hold a public meeting on your analysis.

(4) Prepare responses to public comments received on your analysis.

(5) Submit your analysis.

(b) You may use analyses conducted under the requirements of 40 CFR part 51, subpart I, or part 52, to comply with some of the siting analysis requirements of this subpart.

§60.1125 What must I include in my siting analysis?

(a) Include an analysis of how your municipal waste combustion unit affects four areas:

(1) Ambient air quality.

(2) Visibility.

(3) Soils.

(4) Vegetation.

(b) Include an analysis of alternatives for controlling air pollution that minimize potential risks to the public health and the environment.

§60.1130 How do I make my siting analysis available to the public?

(a) Distribute your siting analysis and revised materials separation plan to the main public libraries in the area where you will construct your municipal waste combustion unit.

(b) Publish a notice of a public meeting in the main newspapers that serve two areas:

(1) The area where you will construct your municipal waste combustion unit.

(2) The areas where the waste that your municipal waste combustion unit combusts will be collected.

(c) Include six items in your notice of the public meeting:

(1) The date of the public meeting.

(2) The time of the public meeting.

(3) The location of the public meeting.

(4) The location of the public libraries where the public can find your siting analysis and revised materials separation plan. Include the normal business hours of each library.

(5) An agenda of the topics that will be discussed at the public meeting.

(6) The beginning and ending dates of the public comment period on your siting analysis and revised materials separation plan.

§60.1135 When must I accept comments on the siting analysis and revised materials separation plan?

(a) You must accept verbal comments at the public meeting.

(b) You must accept written comments anytime during the period that begins on the date the document is distributed to the main public libraries and ends 30 days after the date of the public meeting.

§60.1140 Where and when must I hold a public meeting on the siting analysis?

(a) You must hold a public meeting to discuss and accept comments on your siting analysis and your revised materials separation plan.

(b) You must hold the public meeting in the county where you will construct your municipal waste combustion unit.

(c) You must schedule the public meeting to occur at least 30 days after you make your siting analysis and revised materials separation plan available to the public.

(d) You must prepare a transcript of the public meeting on your siting analysis.

§60.1145 What must I do with any public comments I receive during the public comment period on my siting analysis?

You must do three things:

(a) Prepare written responses to any public comments on your siting analysis and the revised materials separation plan you received during the public comment period. Summarize the responses to public comments in a document that is separate from your materials separation plan and siting analysis.

(b) Make the comment response document available to the public in the service area where you will construct your municipal waste combustion unit. You must distribute the document at least to the main public libraries used to announce the public meeting for the siting analysis.

(c) Prepare a revised siting analysis for the municipal waste combustion unit that includes, as appropriate, changes made in response to any public comments you received during the public comment period.

§60.1150 How do I submit my siting analysis?

As specified under “Reporting” (§60.1380), submit four items as part of the notice of construction:

(a) Your siting analysis.

(b) Your notice of the public meeting on your siting analysis.

(c) A transcript of the public meeting on your siting analysis.

(d) The document that summarizes your responses to the public comments you received during the public comment period.

Good Combustion Practices: Operator Training

§60.1155 What types of training must I do?

There are two types of required training:

(a) Training of operators of municipal waste combustion units using the U.S. Environmental Protection Agency (EPA) or a State-approved training course.

(b) Training of plant personnel using a plant-specific training course.

§60.1160 Who must complete the operator training course? By when?

(a) Three types of employees must complete the EPA or State-approved operator training course:

(1) Chief facility operators.

(2) Shift supervisors.

(3) Control room operators.

(b) Those employees must complete the operator training course by the later of three dates:

(1) Six months after your municipal waste combustion unit initial startup.

(2) December 6, 2001.

(3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

§60.1165 Who must complete the plant-specific training course?

All employees with responsibilities that affect how a municipal waste combustion unit operates must complete the plant-specific training course. Include at least six types of employees:

(a) Chief facility operators.

(b) Shift supervisors.

(c) Control room operators.

(d) Ash handlers.

(e) Maintenance personnel.

(f) Crane or load handlers.

§60.1170 What plant-specific training must I provide?

For plant-specific training, you must do four things:

(a) For training at a particular plant, develop a specific operating manual for that plant by the later of two dates:

(1) Six months after your municipal waste combustion unit initial startup.

(2) December 6, 2001.

(b) Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of your municipal waste combustion unit. Complete the initial review by the later of three dates:

(1) Six months after your municipal waste combustion unit initial startup.

(2) December 6, 2001.

(3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

(c) Update your manual annually.

(d) Review your manual with staff annually.

§60.1175 What information must I include in the plant-specific operating manual?

You must include 11 items in the operating manual for your plant:

(a) A summary of all applicable requirements in this subpart.

(b) A description of the basic combustion principles that apply to municipal waste combustion units.

(c) Procedures for receiving, handling, and feeding municipal solid waste.

(d) Procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustion unit.

(e) Procedures for maintaining a proper level of combustion air supply.

(f) Procedures for operating the municipal waste combustion unit in compliance with the requirements contained in this subpart.

(g) Procedures for responding to periodic upset or off-specification conditions.

(h) Procedures for minimizing carryover of particulate matter.

(i) Procedures for handling ash.

(j) Procedures for monitoring emissions from the municipal waste combustion unit.

(k) Procedures for recordkeeping and reporting.

§60.1180 Where must I keep the plant-specific operating manual?

You must keep your operating manual in an easily accessible location at your plant. It must be available for review or inspection by all employees who must review it and by the Administrator.

Good Combustion Practices: Operator Certification

§60.1185 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?

(a) Each chief facility operator and shift supervisor must obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in §60.17(h)(1)) or a current provisional operator certification from your State certification program.

(b) Each chief facility operator and shift supervisor must obtain a provisional certification by the later of three dates:

(1) Six months after the municipal waste combustion unit initial startup.

(2) December 6, 2001.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

(c) Each chief facility operator and shift supervisor must take one of three actions:

(1) Obtain a full certification from the American Society of Mechanical Engineers or a State certification program in your State.

(2) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in §60.17(h)(1)).

(3) Schedule a full certification exam with your State certification program.

(d) The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by the later of three dates:

(1) Six months after the municipal waste combustion unit initial startup.

(2) December 6, 2001.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

§60.1190 After the required date for operator certification, who may operate the municipal waste combustion unit?

After the required date for full or provisional certifications, you must not operate your municipal waste combustion unit unless one of four employees is on duty:

(a) A fully certified chief facility operator.

(b) A provisionally certified chief facility operator who is scheduled to take the full certification exam.

(c) A fully certified shift supervisor.

(d) A provisionally certified shift supervisor who is scheduled to take the full certification exam.

§60.1195 What if all the certified operators must be temporarily offsite?

If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustion unit may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, you must meet one of three criteria:

(a) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator.

(b) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must record the period when the certified chief facility operator and certified shift supervisor are offsite and include that information in the annual report as specified under §60.1410(l).

(c) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must take two actions:

(1) Notify the Administrator in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is onsite.

(2) Submit a status report and corrective action summary to the Administrator every 4 weeks following the initial notification. If the Administrator notifies you that your status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Administrator withdraws the disapproval, municipal waste combustion unit operation may continue.

Good Combustion Practices: Operating Requirements

§60.1200 What are the operating practice requirements for my municipal waste combustion unit?

(a) You must not operate your municipal waste combustion unit at loads greater than 110 percent of the maximum demonstrated load of the municipal waste combustion unit (4-hour block average), as specified under “Definitions” (§60.1465).

(b) You must not operate your municipal waste combustion unit so that the temperature at the inlet of the particulate matter control device exceeds 17 °C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average), as specified under “Definitions” (§60.1465).

(c) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test.

(d) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to your municipal waste combustion plant must be at or above the required quarterly usage of carbon. At your option, you may choose to evaluate required quarterly carbon usage on a municipal waste combustion unit basis for each individual municipal waste combustion unit at your plant. Calculate the required quarterly usage of carbon using equation 4 or 5 in §60.1460(f).

(e) Your municipal waste combustion unit is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations:

(1) During your annual tests for dioxins/furans.

(2) During your annual mercury tests (for carbon feed rate requirements only).

(3) During the 2 weeks preceding your annual tests for dioxins/furans.

(4) During the 2 weeks preceding your annual mercury tests (for carbon feed rate requirements only).

(5) Whenever the Administrator or delegated State authority permits you to do any of five activities:

(i) Evaluate system performance.

(ii) Test new technology or control technologies.

(iii) Perform diagnostic testing.

(iv) Perform other activities to improve the performance of your municipal waste combustion unit.

(v) Perform other activities to advance the state of the art for emission controls for your municipal waste combustion unit.

§60.1205 What happens to the operating requirements during periods of startup, shutdown, and malfunction?

(a) The operating requirements of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

Emission Limits

§60.1210 What pollutants are regulated by this subpart?

Eleven pollutants, in four groupings, are regulated:

(a) *Organics.* Dioxins/furans.

(b) *Metals.* (1) Cadmium.

(2) Lead.

(3) Mercury.

(4) Opacity.

(5) Particulate matter.

(c) *Acid gases.* (1) Hydrogen chloride.

(2) Nitrogen oxides.

(3) Sulfur dioxide.

(d) *Other.* (1) Carbon monoxide.

(2) Fugitive ash.

§60.1215 What emission limits must I meet? By when?

You must meet the emission limits specified in tables 1 and 2 of this subpart. You must meet the limits 60 days after your municipal waste combustion unit reaches the maximum load level but no later than 180 days after its initial startup.

§60.1220 What happens to the emission limits during periods of startup, shutdown, and malfunction?

(a) The emission limits of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

(c) A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.

(d) During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under §60.11(d) apply.

Continuous Emission Monitoring

§60.1225 What types of continuous emission monitoring must I perform?

To continuously monitor emissions, you must perform four tasks:

(a) Install continuous emission monitoring systems for certain gaseous pollutants.

(b) Make sure your continuous emission monitoring systems are operating correctly.

(c) Make sure you obtain the minimum amount of monitoring data.

(d) Install a continuous opacity monitoring system.

§60.1230 What continuous emission monitoring systems must I install for gaseous pollutants?

(a) You must install, calibrate, maintain, and operate continuous emission monitoring systems for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide. If you operate a Class I municipal waste combustion unit, you must also install, calibrate, maintain, and operate a continuous emission monitoring system for nitrogen oxides. Install the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and oxygen (or carbon dioxide) at the outlet of the air pollution control device.

(b) You must install, evaluate, and operate each continuous emission monitoring system according to the "Monitoring Requirements" in §60.13.

(c) You must monitor the oxygen (or carbon dioxide) concentration at each location where you monitor sulfur dioxide and carbon monoxide. Additionally, if you operate a Class I municipal waste combustion unit, you must also monitor the oxygen (or carbon dioxide) concentration at the location where you monitor nitrogen oxides.

(d) You may choose to monitor carbon dioxide instead of oxygen as a diluent gas. If you choose to monitor carbon dioxide, then an oxygen monitor is not required, and you must follow the requirements in §60.1255.

(e) If you choose to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, you must also install continuous emission monitoring systems for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device.

(f) If you prefer to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction, you can apply to the Administrator for approval to use an alternative monitoring method under §60.13(i).

§60.1235 How are the data from the continuous emission monitoring systems used?

You must use data from the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and carbon monoxide to demonstrate continuous compliance with the emission limits specified in tables 1 and 2 of this subpart. To demonstrate compliance for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, see §60.1290.

§60.1240 How do I make sure my continuous emission monitoring systems are operating correctly?

(a) Conduct initial, daily, quarterly, and annual evaluations of your continuous emission monitoring systems that measure oxygen (or carbon dioxide), sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide.

(b) Complete your initial evaluation of the continuous emission monitoring systems within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

(c) For initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using your oxygen (or carbon dioxide) continuous emission monitoring system, your sulfur dioxide, nitrogen oxides, or carbon monoxide continuous emission monitoring systems, as appropriate, and the appropriate test methods specified in table 3 of this subpart. Collect the data during each initial and annual evaluation of your continuous emission monitoring systems following the applicable performance specifications in appendix B of this part. table 4 of this subpart shows the performance specifications that apply to each continuous emission monitoring system.

(d) Follow the quality assurance procedures in Procedure 1 of appendix F of this part for each continuous emission monitoring system. The procedures include daily calibration drift and quarterly accuracy determinations.

§60.1245 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?

Yes, the accuracy tests for your sulfur dioxide continuous emission monitoring system require you to also evaluate your oxygen (or carbon dioxide) continuous emission monitoring system. Therefore, your oxygen (or carbon dioxide) continuous emission monitoring system is exempt from two requirements:

(a) Section 2.3 of Performance Specification 3 in appendix B of this part (relative accuracy requirement).

(b) Section 5.1.1 of appendix F of this part (relative accuracy test audit).

§60.1250 What is my schedule for evaluating continuous emission monitoring systems?

(a) Conduct annual evaluations of your continuous emission monitoring systems no more than 13 months after the previous evaluation was conducted.

(b) Evaluate your continuous emission monitoring systems daily and quarterly as specified in appendix F of this part.

§60.1255 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?

You must establish the relationship between oxygen and carbon dioxide during the initial evaluation of your continuous emission monitoring systems. You may reestablish the relationship during annual evaluations. To establish the relationship use three procedures:

(a) Use EPA Reference Method 3A or 3B in appendix A of this part to determine oxygen concentration at the location of your carbon dioxide monitor.

(b) Conduct at least three test runs for oxygen. Make sure each test run represents a 1-hour average and that sampling continues for at least 30 minutes in each hour.

(c) Use the fuel-factor equation in EPA Reference Method 3B in appendix A of this part to determine the relationship between oxygen and carbon dioxide.

§60.1260 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?

(a) Where continuous emission monitoring systems are required, obtain 1-hour arithmetic averages. Make sure the averages for sulfur dioxide, nitrogen oxides, and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level). Use the 1-hour averages of oxygen (or carbon dioxide) data from your continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level).

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Section 60.13(e)(2) requires your continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period.

(c) Obtain valid 1-hour averages for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement regardless of the emission level monitored, and you must notify the Administrator according to §60.1410(e).

(e) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with §60.1265.

§60.1265 How do I convert my 1-hour arithmetic averages into the appropriate averaging times and units?

(a) Use the equation in §60.1460(a) to calculate emissions at 7 percent oxygen.

(b) Use EPA Reference Method 19 in appendix A of this part, section 4.3, to calculate the daily geometric average concentrations of sulfur dioxide emissions. If you are monitoring the percent reduction of sulfur dioxide, use EPA Reference Method 19 in appendix A of this part, section 5.4, to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.

(c) If you operate a Class I municipal waste combustion unit, use EPA Reference Method 19 in appendix A of this part, section 4.1, to calculate the daily arithmetic average for concentrations of nitrogen oxides.

(d) Use EPA Reference Method 19 in appendix A of this part, section 4.1, to calculate the 4-hour or 24-hour daily block averages (as applicable) for concentrations of carbon monoxide.

§60.1270 What is required for my continuous opacity monitoring system and how are the data used?

(a) Install, calibrate, maintain, and operate a continuous opacity monitoring system.

(b) Install, evaluate, and operate each continuous opacity monitoring system according to §60.13.

(c) Complete an initial evaluation of your continuous opacity monitoring system according to Performance Specification 1 in appendix B of this part. Complete the evaluation within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no more than 180 days after its initial startup.

(d) Complete each annual evaluation of your continuous opacity monitoring system no more than 13 months after the previous evaluation.

(e) Use tests conducted according to EPA Reference Method 9 in appendix A of this part, as specified in §60.1300, to determine compliance with the opacity limit in table 1 of this subpart. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the opacity limit.

§60.1275 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?

Use the required span values and applicable performance specifications in table 4 of this subpart.

§60.1280 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?

Refer to table 4 of this subpart. It shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

Stack Testing

§60.1285 What types of stack tests must I conduct?

Conduct initial and annual stack tests to measure the emission levels of dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

§60.1290 How are the stack test data used?

You must use results of stack tests for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the emission limits in table 1 of this subpart. To demonstrate compliance for carbon monoxide, nitrogen oxides, and sulfur dioxide, see §60.1235.

§60.1295 What schedule must I follow for the stack testing?

(a) Conduct initial stack tests for the pollutants listed in §60.1285 within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

(b) Conduct annual stack tests for the same pollutants after the initial stack test. Conduct each annual stack test no later than 13 months after the previous stack test.

§60.1300 What test methods must I use to stack test?

(a) Follow table 5 of this subpart to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

(b) Make sure that stack tests for all the pollutants consist of at least three test runs, as specified in §60.8. Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the emission limits in table 1 of this subpart.

(c) Obtain an oxygen (or carbon dioxide) measurement at the same time as your pollutant measurements to determine diluent gas levels, as specified in §60.1230.

(d) Use the equations in §60.1460(a) to calculate emission levels at 7 percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in table 5 of this subpart for other required equations.

(e) You can apply to the Administrator for approval under §60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which the Administrator has determined are adequate for demonstrating compliance, waive the requirement for a performance test because you have demonstrated by other means that you are in compliance, or use a shorter sampling time or smaller sampling volume.

§60.1305 May I conduct stack testing less often?

(a) You may test less often if you own or operate a Class II municipal waste combustion unit and if all stack tests for a given pollutant over 3 consecutive years show you comply with the emission limit. In that case, you are not required to conduct a stack test for that pollutant for the next 2 years. However, you must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows you comply with the emission limit. Thereafter, you must perform stack tests every 3rd year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, you must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The provision applies to all pollutants subject to stack testing requirements: dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

(b) You can test less often for dioxins/furans emissions if you own or operate a municipal waste combustion plant that meets two conditions. First, you have multiple municipal waste combustion units onsite that are subject to this subpart. Second, all those municipal waste combustion units have demonstrated levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass) for 2 consecutive years. In that case, you may choose to conduct annual stack tests on only one municipal waste combustion unit per year at your plant. The provision only applies to stack testing for dioxins/furans emissions.

(1) Conduct the stack test no more than 13 months following a stack test on any municipal waste combustion unit subject to this subpart at your plant. Each year, test a different municipal waste combustion unit subject to this subpart and test all municipal waste combustion units subject to this subpart in a sequence that you determine. Once you determine a testing sequence, it must not be changed without approval by the Administrator.

(2) If each annual stack test shows levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass), you may continue stack tests on only one municipal waste combustion unit subject to this subpart per year.

(3) If any annual stack test indicates levels of dioxins/furans emissions greater than 7 nanograms per dry standard cubic meter (total mass), conduct subsequent annual stack tests on all municipal waste combustion units subject to this subpart at your plant. You may return to testing one municipal waste combustion unit subject to this subpart per year if you can demonstrate dioxins/furans emission levels less than or equal to 7 nanograms per dry standard cubic meter (total mass) for all municipal waste combustion units at your plant subject to this subpart for 2 consecutive years.

§60.1310 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?

You may not deviate from the 13-month testing schedules specified in §§60.1295(b) and 60.1305(b)(1) unless you apply to the Administrator for an alternative schedule, and the Administrator approves your request for alternate scheduling prior to the date on which you would otherwise have been required to conduct the next stack test.

Other Monitoring Requirements

§60.1315 Must I meet other requirements for continuous monitoring?

You must also monitor three operating parameters:

(a) Load level of each municipal waste combustion unit.

(b) Temperature of flue gases at the inlet of your particulate matter air pollution control device.

(c) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

§60.1320 How do I monitor the load of my municipal waste combustion unit?

(a) If your municipal waste combustion unit generates steam, you must install, calibrate, maintain, and operate a steam flowmeter or a feed water flowmeter and meet five requirements:

(1) Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.

(2) Calculate your steam (or feed water) flow in 4-hour block averages.

(3) Calculate the steam (or feed water) flow rate using the method in “American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1—1964 (R1991),” section 4 (incorporated by reference in §60.17(h)(2)).

(4) Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in “American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, part II of Fluid Meters,” 6th Edition (1971), chapter 4 (incorporated by reference in §60.17(h)(3)).

(5) Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.

(b) If your municipal waste combustion unit does not generate steam, or, if your municipal waste combustion units have shared steam systems and steam load cannot be estimated per unit, you must determine, to the satisfaction of the Administrator, one or more operating parameters that can be used to continuously estimate load level (for example, the feed rate of municipal solid waste or refuse-derived fuel). You must continuously monitor the selected parameters.

§60.1325 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?

You must install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device.

§60.1330 How do I monitor the injection rate of activated carbon?

If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must meet three requirements:

(a) Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).

(b) During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.

(c) Continuously monitor the selected operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste, and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter. When calculating the 8-hour block average, do two things:

(1) Exclude hours when the municipal waste combustion unit is not operating.

(2) Include hours when the municipal waste combustion unit is operating but the carbon feed system is not working correctly.

§60.1335 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?

(a) Where continuous parameter monitoring systems are used, obtain 1-hour arithmetic averages for three parameters:

(1) Load level of the municipal waste combustion unit.

(2) Temperature of the flue gases at the inlet of your particulate matter control device.

(3) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.

(c) Obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement and you must notify the Administrator according to §60.1410(e).

Recordkeeping

§60.1340 What records must I keep?

You must keep five types of records:

(a) Materials separation plan and siting analysis.

(b) Operator training and certification.

(c) Stack tests.

(d) Continuously monitored pollutants and parameters.

(e) Carbon feed rate.

§60.1345 Where must I keep my records and for how long?

(a) Keep all records onsite in paper copy or electronic format unless the Administrator approves another format.

(b) Keep all records on each municipal waste combustion unit for at least 5 years.

(c) Make all records available for submittal to the Administrator, or for onsite review by an inspector.

§60.1350 What records must I keep for the materials separation plan and siting analysis?

You must keep records of five items:

(a) The date of each record.

(b) The final materials separation plan.

(c) The siting analysis.

(d) A record of the location and date of the public meetings.

(e) Your responses to the public comments received during the public comment periods.

§60.1355 What records must I keep for operator training and certification?

You must keep records of six items:

(a) *Records of provisional certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of the initial provisional certifications.

(3) Documentation showing current provisional certifications.

(b) *Records of full certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of initial and renewal full certifications.

(3) Documentation showing current full certifications.

(c) *Records showing completion of the operator training course.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course.

(2) Dates of completion of the operator training course.

(3) Documentation showing completion of the operator training course.

(d) *Records of reviews for plant-specific operating manuals.* Include three items:

(1) Names of persons who have reviewed the operating manual.

(2) Date of the initial review.

(3) Dates of subsequent annual reviews.

(e) *Records of when a certified operator is temporarily offsite.* Include two main items:

(1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.

(2) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:

(i) Your notice that all certified persons are offsite.

(ii) The conditions that cause those people to be offsite.

(iii) The corrective actions you are taking to ensure a certified chief facility operator or certified shift supervisor is onsite.

(iv) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.

(f) *Records of calendar dates.* Include the calendar date on each record.

§60.1360 What records must I keep for stack tests?

For stack tests required under §60.1285, you must keep records of four items:

(a) The results of the stack tests for eight pollutants or parameters recorded in the appropriate units of measure specified in table 1 of this subpart:

(1) Dioxins/furans.

(2) Cadmium.

(3) Lead.

(4) Mercury.

(5) Opacity.

(6) Particulate matter.

(7) Hydrogen chloride.

(8) Fugitive ash.

(b) Test reports including supporting calculations that document the results of all stack tests.

(c) The maximum demonstrated load of your municipal waste combustion units and maximum temperature at the inlet of your particulate matter control device during all stack tests for dioxins/furans emissions.

(d) The calendar date of each record.

§60.1365 What records must I keep for continuously monitored pollutants or parameters?

You must keep records of eight items:

(a) *Records of monitoring data.* Document six parameters measured using continuous monitoring systems:

(1) All 6-minute average levels of opacity.

(2) All 1-hour average concentrations of sulfur dioxide emissions.

(3) For Class I municipal waste combustion units only, all 1-hour average concentrations of nitrogen oxides emissions.

(4) All 1-hour average concentrations of carbon monoxide emissions.

(5) All 1-hour average load levels of your municipal waste combustion unit.

(6) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.

(b) *Records of average concentrations and percent reductions.* Document five parameters:

(1) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, all 24-hour daily arithmetic average concentrations of nitrogen oxides emissions.

(3) All 4-hour block or 24-hour daily block arithmetic average concentrations of carbon monoxide emissions.

(4) All 4-hour block arithmetic average load levels of your municipal waste combustion unit.

(5) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.

(c) *Records of exceedances.* Document three items:

(1) Calendar dates whenever any of the five pollutant or parameter levels recorded in paragraph (b) of this section or the opacity level recorded in paragraph (a)(1) of this section did not meet the emission limits or operating levels specified in this subpart.

(2) Reasons you exceeded the applicable emission limits or operating levels.

(3) Corrective actions you took, or are taking, to meet the emission limits or operating levels.

(d) *Records of minimum data.* Document three items:

(1) Calendar dates for which you did not collect the minimum amount of data required under §§60.1260 and 60.1335. Record the dates for five types of pollutants and parameters:

(i) Sulfur dioxide emissions.

(ii) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(iii) Carbon monoxide emissions.

(iv) Load levels of your municipal waste combustion unit.

(v) Temperatures of the flue gases at the inlet of the particulate matter control device.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took, or are taking, to obtain the required amount of data.

(e) *Records of exclusions.* Document each time you have excluded data from your calculation of averages for any of the following five pollutants or parameters and the reasons the data were excluded:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load levels of your municipal waste combustion unit.

(5) Temperatures of the flue gases at the inlet of the particulate matter control device.

(f) *Records of drift and accuracy.* Document the results of your daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of this part. Keep the records for the sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide continuous emissions monitoring systems.

(g) *Records of the relationship between oxygen and carbon dioxide.* If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, document the relationship between oxygen and carbon dioxide, as specified in §60.1255.

(h) *Records of calendar dates.* Include the calendar date on each record.

§60.1370 What records must I keep for municipal waste combustion units that use activated carbon?

For municipal waste combustion units that use activated carbon to control dioxins/furans or mercury emissions, you must keep records of five items:

(a) *Records of average carbon feed rate.* Document five items:

(1) Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.

(2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.

(3) All 8-hour block average carbon feed rates in kilograms (or pounds) per hour calculated from the monitored operating parameter.

(4) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include supporting documentation.

(5) Required quarterly usage of carbon for the municipal waste combustion plant, calculated using equation 4 or 5 in §60.1460(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant. Include supporting calculations.

(b) *Records of low carbon feed rates.* Document three items:

(1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).

(2) Reasons for the low carbon feed rates.

(3) Corrective actions you took or are taking to meet the 8-hour average carbon feed rate requirement.

(c) *Records of minimum carbon feed rate data.* Document three items:

(1) Calendar dates for which you did not collect the minimum amount of carbon feed rate data required under §60.1335.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took or are taking to get the required amount of data.

(d) *Records of exclusions.* Document each time you have excluded data from your calculation of average carbon feed rates and the reasons the data were excluded.

(e) *Records of calendar dates.* Include the calendar date on each record.

Reporting

§60.1375 What reports must I submit before I submit my notice of construction?

(a) If you are required to submit an application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, you must submit five items by the date you submit your application.

(1) Your draft materials separation plan, as specified in §60.1065.

(2) Your revised materials separation plan, as specified in §60.1085(c).

(3) Your notice of the initial public meeting for your draft materials separation plan, as specified in §60.1070(b).

(4) A transcript of the initial public meeting, as specified in §60.1080(f).

(5) The document that summarizes your responses to the public comments you received during the initial public comment period, as specified in §60.1085(a).

(b) If you are not required to submit an application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, you must submit the items in paragraph (a) of this section with your notice of construction.

§60.1380 What must I include in my notice of construction?

(a) Include ten items:

(1) A statement of your intent to construct the municipal waste combustion unit.

(2) The planned initial startup date of your municipal waste combustion unit.

(3) The types of fuels you plan to combust in your municipal waste combustion unit.

(4) The capacity of your municipal waste combustion unit including supporting capacity calculations, as specified in §60.1460(d) and (e).

(5) Your siting analysis, as specified in §60.1125.

(6) Your final materials separation plan, as specified in §60.1100(b).

(7) Your notice of the second public meeting (siting analysis meeting), as specified in §60.1130(b).

(8) A transcript of the second public meeting, as specified in §60.1140(d).

(9) A copy of the document that summarizes your responses to the public comments you received during the second public comment period, as specified in §60.1145(a).

(10) Your final siting analysis, as specified in §60.1145(c).

(b) Submit your notice of construction no later than 30 days after you commence construction, reconstruction, or modification of your municipal waste combustion unit.

§60.1385 What reports must I submit after I submit my notice of construction and in what form?

(a) Submit an initial report and annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits specified in this subpart.

(b) Submit all reports on paper, postmarked on or before the submittal dates in §§60.1395, 60.1405, and 60.1420. If the Administrator agrees, you may submit electronic reports.

(c) Keep a copy of all reports required by §§60.1400, 60.1410, and 60.1425 onsite for 5 years.

§60.1390 What are the appropriate units of measurement for reporting my data?

See tables 1 and 2 of this subpart for appropriate units of measurement.

§60.1395 When must I submit the initial report?

As specified in §60.7(c), submit your initial report within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

§60.1400 What must I include in my initial report?

You must include seven items:

(a) The emission levels measured on the date of the initial evaluation of your continuous emission monitoring systems for all of the following five pollutants or parameters as recorded in accordance with §60.1365(b).

(1) The 24-hour daily geometric average concentration of sulfur dioxide emissions or the 24-hour daily geometric percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, the 24-hour daily arithmetic average concentration of nitrogen oxides emissions.

(3) The 4-hour block or 24-hour daily arithmetic average concentration of carbon monoxide emissions.

(4) The 4-hour block arithmetic average load level of your municipal waste combustion unit.

(5) The 4-hour block arithmetic average flue gas temperature at the inlet of the particulate matter control device.

(b) The results of the initial stack tests for eight pollutants or parameters (use appropriate units as specified in table 2 of this subpart):

(1) Dioxins/furans.

(2) Cadmium.

(3) Lead.

(4) Mercury.

(5) Opacity.

(6) Particulate matter.

(7) Hydrogen chloride.

(8) Fugitive ash.

(c) The test report that documents the initial stack tests including supporting calculations.

(d) The initial performance evaluation of your continuous emissions monitoring systems. Use the applicable performance specifications in appendix B of this part in conducting the evaluation.

(e) The maximum demonstrated load of your municipal waste combustion unit and the maximum demonstrated temperature of the flue gases at the inlet of the particulate matter control device. Use values established during your initial stack test for dioxins/furans emissions and include supporting calculations.

(f) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, the average carbon feed rates that you recorded during the initial stack tests for dioxins/furans and mercury emissions. Include supporting calculations as specified in §60.1370(a)(1) and (2).

(g) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in §60.1255.

§60.1405 When must I submit the annual report?

Submit the annual report no later than February 1 of each year that follows the calendar year in which you collected the data. If you have an operating permit for any unit under title V of the Clean Air Act (CAA), the permit may require you to submit semiannual reports. Parts 70 and 71 of this chapter contain program requirements for permits.

§60.1410 What must I include in my annual report?

Summarize data collected for all pollutants and parameters regulated under this subpart. Your summary must include twelve items:

(a) The results of the annual stack test, using appropriate units, for eight pollutants, as recorded under §60.1360(a):

(1) Dioxins/furans.

(2) Cadmium.

(3) Lead.

(4) Mercury.

(5) Particulate matter.

(6) Opacity.

(7) Hydrogen chloride.

(8) Fugitive ash.

(b) A list of the highest average levels recorded, in the appropriate units. List the values for five pollutants or parameters:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).

(c) The highest 6-minute opacity level measured. Base the value on all 6-minute average opacity levels recorded by your continuous opacity monitoring system (§60.1365(a)(1)).

(d) For municipal waste combustion units that use activated carbon for controlling dioxins/furans or mercury emissions, include four records:

(1) The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.

(2) The lowest 8-hour block average carbon feed rate recorded during the year.

(3) The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant.

(4) The required quarterly carbon usage of your municipal waste combustion plant calculated using equation 4 or 5 in §60.1460(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant.

(e) The total number of days that you did not obtain the minimum number of hours of data for six pollutants or parameters. Include the reasons you did not obtain the data and corrective actions that you have taken to obtain the data in the future. Include data on:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

(6) Carbon feed rate.

(f) The number of hours you have excluded data from the calculation of average levels (include the reasons for excluding it). Include data for six pollutants or parameters:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

(6) Carbon feed rate.

(g) A notice of your intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year, if you are eligible for alternative scheduling (§60.1305(a) or (b)).

(h) A notice of your intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if you are eligible for alternative scheduling (§60.1305(a)).

(i) A summary of any emission or parameter level that did not meet the limits specified in this subpart.

(j) A summary of the data in paragraphs (a) through (d) of this section from the year preceding the reporting year which gives the Administrator a summary of the performance of the municipal waste combustion unit over a 2-year period.

(k) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in §60.1255.

(l) Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.

§60.1415 What must I do if I am out of compliance with the requirements of this subpart?

You must submit a semiannual report on any recorded emission or parameter level that does not meet the requirements specified in this subpart.

§60.1420 If a semiannual report is required, when must I submit it?

(a) For data collected during the first half of a calendar year, submit your semiannual report by August 1 of that year.

(b) For data you collected during the second half of the calendar year, submit your semiannual report by February 1 of the following year.

§60.1425 What must I include in the semiannual out-of-compliance reports?

You must include three items in the semiannual report:

(a) For any of the following six pollutants or parameters that exceeded the limits specified in this subpart, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and your corrective actions:

(1) Concentration or percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, concentration of nitrogen oxides emissions.

(3) Concentration of carbon monoxide emissions.

(4) Load level of your municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of your particulate matter air pollution control device.

(6) Average 6-minute opacity level. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions.

(b) If the results of your annual stack tests (as recorded in §60.1360(a)) show emissions above the limits specified in table 1 of this subpart for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and your corrective actions.

(c) For municipal waste combustion units that apply activated carbon to control dioxins/furans or mercury emissions, include two items:

(1) Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in §60.1370(a)(1)). Include four items:

(i) Eight-hour average carbon feed rate.

(ii) Reasons for occurrences of low carbon feed rates.

(iii) The corrective actions you have taken to meet the carbon feed rate requirement.

(iv) The calendar date.

(2) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include five items:

(i) Amount of carbon purchased and delivered to the plant.

(ii) Required quarterly usage of carbon.

(iii) Reasons for not meeting the required quarterly usage of carbon.

(iv) The corrective actions you have taken to meet the required quarterly usage of carbon.

(v) The calendar date.

§60.1430 Can reporting dates be changed?

(a) If the Administrator agrees, you may change the semiannual or annual reporting dates.

(b) See §60.19(c) for procedures to seek approval to change your reporting date.

Air Curtain Incinerators that Burn 100 Percent Yard Waste

§60.1435 What is an air curtain incinerator?

An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

§60.1440 What is yard waste?

Yard waste is grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(a) Construction, renovation, and demolition wastes that are exempt from the definition of “municipal solid waste” in §60.1465.

(b) Clean wood that is exempt from the definition of “municipal solid waste” in §60.1465.

§60.1445 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?

If your air curtain incinerator combusts 100 percent yard waste, you must meet only the emission limits in this section.

(a) Within 60 days after your air curtain incinerator reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup, you must meet two limits:

(1) The opacity limit is 10 percent (6-minute average) for air curtain incinerators that can combust at least 35 tons per day of municipal solid waste and no more than 250 tons per day of municipal solid waste.

(2) The opacity limit is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times. Each malfunction must not exceed 3 hours.

§60.1450 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?

(a) Use EPA Reference Method 9 in appendix A of this part to determine compliance with the opacity limit.

(b) Conduct an initial test for opacity as specified in §60.8.

(c) After the initial test for opacity, conduct annual tests no more than 13 calendar months following the date of your previous test.

§60.1455 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?

(a) Provide a notice of construction that includes four items:

(1) Your intent to construct the air curtain incinerator.

(2) Your planned initial startup date.

(3) Types of fuels you plan to combust in your air curtain incinerator.

(4) The capacity of your incinerator, including supporting capacity calculations, as specified in §60.1460(d) and (e).

(b) Keep records of results of all opacity tests onsite in either paper copy or electronic format unless the Administrator approves another format.

(c) Keep all records for each incinerator for at least 5 years.

(d) Make all records available for submittal to the Administrator or for onsite review by an inspector.

(e) Submit the results (each 6-minute average) of the opacity tests by February 1 of the year following the year of the opacity emission test.

(f) Submit reports as a paper copy on or before the applicable submittal date. If the Administrator agrees, you may submit reports on electronic media.

(g) If the Administrator agrees, you may change the annual reporting dates (see §60.19(c)).

(h) Keep a copy of all reports onsite for a period of 5 years.

Equations

§60.1460 What equations must I use?

(a) *Concentration correction to 7 percent oxygen.* Correct any pollutant concentration to 7 percent oxygen using equation 1 of this section:

$C_{7\%} = C_{unc} * (13.9) * (1/(20.9-CO_2))$ (Eq.1)

Where:

$C_{7\%}$ = concentration corrected to 7 percent oxygen.

C_{unc} = uncorrected pollutant concentration.

CO_2 = concentration of oxygen (percent).

(b) *Percent reduction in potential mercury emissions.* Calculate the percent reduction in potential mercury emissions ($\%P_{Hg}$) using equation 2 of this section:

$\%P_{Hg} = (E_{i-o}) * (100/E_i)$ (Eq. 2)

Where:

$\%P_{Hg}$ = percent reduction of potential mercury emissions

E_i = mercury emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

E_o = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(c) *Percent reduction in potential hydrogen chloride emissions.* Calculate the percent reduction in potential hydrogen chloride emissions ($\%P_{HC1}$) using equation 3 of this section:

$\%P_{HC1} = (E_{i-o}) * (100/E_i)$ (Eq. 3)

Where:

$\%P_{HC1}$ = percent reduction of the potential hydrogen chloride emissions

E_I = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

E_O = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(d) *Capacity of a municipal waste combustion unit.* For a municipal waste combustion unit that can operate continuously for 24-hour periods, calculate the municipal waste combustion unit capacity based on 24 hours of operation at the maximum charge rate. To determine the maximum charge rate, use one of two methods:

(1) For municipal waste combustion units with a design based on heat input capacity, calculate the maximum charging rate based on the maximum heat input capacity and one of two heating values:

(i) If your municipal waste combustion unit combusts refuse-derived fuel, use a heating value of 12,800 kilojoules per kilogram (5,500 British thermal units per pound).

(ii) If your municipal waste combustion unit combusts municipal solid waste, use a heating value of 10,500 kilojoules per kilogram (4,500 British thermal units per pound).

(2) For municipal waste combustion units with a design not based on heat input capacity, use the maximum designed charging rate.

(e) *Capacity of a batch municipal waste combustion unit.* Calculate the capacity of a batch municipal waste combustion unit as the maximum design amount of municipal solid waste they can charge per batch multiplied by the maximum number of batches they can process in 24 hours. Calculate the maximum number of batches by dividing 24 by the number of hours needed to process one batch. Retain fractional batches in the calculation. For example, if one batch requires 16 hours, the municipal waste combustion unit can combust 24/16, or 1.5 batches, in 24 hours.

(f) *Quarterly carbon usage.* If you use activated carbon to comply with the dioxins/furans or mercury limits, calculate the required quarterly usage of carbon using equation 4 of this section for plant basis or equation 5 of this section for unit basis:

(1) Plant basis.

$$C = \sum_{i=1}^{n} f_i * h_i \qquad (Eq.\ 4)$$

Where:

C = required quarterly carbon usage for the plant in kilograms (or pounds).

f_i = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

h_i = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

n = number of municipal waste combustion units, i, located at your plant.

(2) Unit basis.

$$C = f * h \qquad (Eq.\ 5)$$

Where:

C = required quarterly carbon usage for the unit in kilograms (or pounds).

f = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

h = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

Definitions

§60.1465 What definitions must I know?

Terms used but not defined in this section are defined in the CAA and in subparts A and B of this part.

Administrator means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or the Administrator of a State Air Pollution Control Agency.

Air curtain incinerator means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

Batch municipal waste combustion unit means a municipal waste combustion unit designed so it cannot combust municipal solid waste continuously 24 hours per day because the design does not allow waste to be fed to the unit or ash to be removed during combustion.

Calendar quarter means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

Calendar year means 365 (or 366 consecutive days for leap years) consecutive days starting on January 1 and ending on December 31.

Chief facility operator means the person in direct charge and control of the operation of a municipal waste combustion unit. That person is responsible for daily onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit.

Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See the definition in this section of “municipal waste combustion plant capacity” for specification of which units at a plant site are included in the aggregate capacity calculation.

Class II units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See the definition in this section of “municipal waste combustion plant capacity” for specification of which units at a plant site are included in the aggregate capacity calculation.

Clean wood means untreated wood or untreated wood products including clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include two items:

(1) “Yard waste,” which is defined elsewhere in this section.

(2) Construction, renovation, or demolition wastes (for example, railroad ties and telephone poles) that are exempt from the definition of “municipal solid waste” in this section.

Co-fired combustion unit means a unit that combusts municipal solid waste with nonmunicipal solid waste fuel (for example, coal, industrial process waste). To be considered a co-fired combustion unit, the unit must be subject to a federally enforceable permit that limits it to combusting a fuel feed stream which is 30 percent or less (by weight) municipal solid waste as measured each calendar quarter.

Continuous burning means the continuous, semicontinuous, or batch feeding of municipal solid waste to dispose of the waste, produce energy, or provide heat to the combustion system in preparation for waste disposal or energy production. Continuous burning does not mean the use of municipal solid waste solely to thermally protect the grate or hearth during the startup period when municipal solid waste is not fed to the grate or hearth.

Continuous emission monitoring system means a monitoring system that continuously measures the emissions of a pollutant from a municipal waste combustion unit.

Dioxins/furans mean tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

Eight-hour block average means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of three 8-hour periods of time:

(1) 12:00 midnight to 8:00 a.m.

(2) 8:00 a.m. to 4:00 p.m.

(3) 4:00 p.m. to 12:00 midnight.

Federally enforceable means all limits and conditions the Administrator can enforce (including the requirements of 40 CFR parts 60, 61, and 63), requirements in a State's implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

First calendar half means the period that starts on January 1 and ends on June 30 in any year.

Fluidized bed combustion unit means a unit where municipal waste is combusted in a fluidized bed of material. The fluidized bed material may remain in the primary combustion zone or may be carried out of the primary combustion zone and returned through a recirculation loop.

Four-hour block average or *4-hour block average* means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of six 4-hour periods:

(1) 12:00 midnight to 4:00 a.m.

(2) 4:00 a.m. to 8:00 a.m.

(3) 8:00 a.m. to 12:00 noon.

(4) 12:00 noon to 4:00 p.m.

(5) 4:00 p.m. to 8:00 p.m.

(6) 8:00 p.m. to 12:00 midnight.

Mass burn refractory municipal waste combustion unit means a field-erected municipal waste combustion unit that combusts municipal solid waste in a refractory wall furnace. Unless otherwise specified, that includes municipal waste combustion units with a cylindrical rotary refractory wall furnace.

Mass burn rotary waterwall municipal waste combustion unit means a field-erected municipal waste combustion unit that combusts municipal solid waste in a cylindrical rotary waterwall furnace.

Mass burn waterwall municipal waste combustion unit means a field-erected municipal waste combustion unit that combusts municipal solid waste in a waterwall furnace.

Materials separation plan means a plan that identifies a goal and an approach for separating certain components of municipal solid waste for a given service area in order to make the separated materials available for recycling. A materials separation plan may include three items:

(1) Elements such as dropoff facilities, buy-back or deposit-return incentives, curbside pickup programs, or centralized mechanical separation systems.

(2) Different goals or approaches for different subareas in the service area.

(3) No materials separation activities for certain subareas or, if warranted, the entire service area.

Maximum demonstrated load of a municipal waste combustion unit means the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxins/furans stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in this subpart.

Maximum demonstrated temperature of the particulate matter control device means the highest 4-hour block arithmetic average flue gas temperature measured at the inlet of the particulate matter control device during 4 consecutive hours in the course of the most recent stack test for dioxins/furans emissions that demonstrates compliance with the limits specified in this subpart.

Medical/infectious waste means any waste meeting the definition of “medical/infectious waste” in §60.51c of subpart E, of this part.

Mixed fuel-fired (pulverized coal/refuse-derived fuel) combustion unit means a combustion unit that combusts coal and refuse-derived fuel simultaneously, in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the unit where it is combusted in suspension. That includes both conventional pulverized coal and micropulverized coal.

Modification or *modified municipal waste combustion unit* means a municipal waste combustion unit you have changed after June 6, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the unit (not including the cost of land) updated to current costs.

(2) Any physical change in the municipal waste combustion unit or change in the method of operating it that increases the emission level of any air pollutant for which new source performance standards have been established under section 129 or section 111 of the CAA. Increases in the emission level of any air pollutant are determined when the municipal waste combustion unit operates at 100 percent of its physical load capability and are measured downstream of all air pollution control devices. Load restrictions based on permits or other nonphysical operational restrictions cannot be considered in the determination.

Modular excess-air municipal waste combustion unit means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers, all of which are designed to operate at conditions with combustion air amounts in excess of theoretical air requirements.

Modular starved-air municipal waste combustion unit means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers in which the primary combustion chamber is designed to operate at substoichiometric conditions.

Municipal solid waste or *municipal-type solid waste* means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

Municipal waste combustion plant means one or more municipal waste combustion units at the same location as specified under Applicability (§60.1015(a)and (b)).

Municipal waste combustion plant capacity means the aggregate municipal waste combustion capacity of all municipal waste combustion units at the plant that are subject to subparts Ea or Eb of this part, or this subpart.

Municipal waste combustion unit means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected combustion units (with or without heat recovery), modular combustion units (starved-air or excess-air), boilers (for example, steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. Two criteria further define municipal waste combustion units:

(1) Municipal waste combustion units do not include pyrolysis or combustion units located at a plastics or rubber recycling unit as specified under Applicability (§60.1020(h) and (i)). Municipal waste combustion units also do not include cement kilns that combust municipal solid waste as specified under Applicability (§60.1020(j)). Municipal waste combustion units also do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

(2) The boundaries of a municipal waste combustion unit are defined as follows. The municipal waste combustion unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustion unit water system. The municipal waste combustion unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine-generator set. The municipal waste combustion unit boundary starts at the municipal solid waste pit or hopper and extends through three areas:

(i) The combustion unit flue gas system, which ends immediately after the heat recovery equipment or, if there is no heat recovery equipment, immediately after the combustion chamber.

(ii) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. It includes all ash handling systems connected to the bottom ash handling system.

(iii) The combustion unit water system, which starts at the feed water pump and ends at the piping that exits the steam drum or superheater.

Particulate matter means total particulate matter emitted from municipal waste combustion units as measured using EPA Reference Method 5 in appendix A of this part and the procedures specified in §60.1300.

Plastics or rubber recycling unit means an integrated processing unit for which plastics, rubber, or rubber tires are the only feed materials (incidental contaminants may be in the feed materials). The feed materials are processed and marketed to become input feed stock for chemical plants or petroleum refineries. The following three criteria further define a plastics or rubber recycling unit:

(1) Each calendar quarter, the combined weight of the feed stock that a plastics or rubber recycling unit produces must be more than 70 percent of the combined weight of the plastics, rubber, and rubber tires that recycling unit processes.

(2) The plastics, rubber, or rubber tires fed to the recycling unit may originate from separating or diverting plastics, rubber, or rubber tires from municipal or industrial solid waste. The feed materials may include manufacturing scraps, trimmings, and off-specification plastics, rubber, and rubber tire discards.

(3) The plastics, rubber, and rubber tires fed to the recycling unit may contain incidental contaminants (for example, paper labels on plastic bottles or metal rings on plastic bottle caps).

Potential hydrogen chloride emissions means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

Potential mercury emissions means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without controls for mercury emissions.

Potential sulfur dioxide emissions means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

Pyrolysis/combustion unit means a unit that produces gases, liquids, or solids by heating municipal solid waste. The gases, liquids, or solids produced are combusted and the emissions vented to the atmosphere.

Reconstruction means rebuilding a municipal waste combustion unit and meeting two criteria:

(1) The reconstruction begins after June 6, 2001.

(2) The cumulative cost of the construction over the life of the unit exceeds 50 percent of the original cost of building and installing the municipal waste combustion unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the municipal waste combustion unit used to calculate those costs, see the definition in this section of "municipal waste combustion unit."

Refractory unit or *refractory wall furnace* means a municipal waste combustion unit that has no energy recovery (such as through a waterwall) in the furnace of the municipal waste combustion unit.

Refuse-derived fuel means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. That includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

Same location means the same or contiguous properties under common ownership or control, including those separated only by a street, road, highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or any combination thereof. Entities may include a municipality, other governmental unit, or any quasi-governmental authority (for example, a public utility district or regional authority for waste disposal).

Second calendar half means the period that starts on July 1 and ends on December 31 in any year.

Shift supervisor means the person who is in direct charge and control of operating a municipal waste combustion unit and who is responsible for onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit during an assigned shift.

Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel) combustion unit means a municipal waste combustion unit that combusts coal and refuse-derived fuel simultaneously, in which coal is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Standard conditions when referring to units of measure mean a temperature of 20 °C and a pressure of 101.3 kilopascals.

Startup period means the period when a municipal waste combustion unit begins the continuous combustion of municipal solid waste. It does not include any warmup period during which the municipal waste combustion unit combusts fossil fuel or other solid waste fuel but receives no municipal solid waste.

Stoker (refuse-derived fuel) combustion unit means a steam generating unit that combusts refuse-derived fuel in a semisuspension combusting mode, using air-fed distributors.

Total mass dioxins/furans or *total mass* means the total mass of tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans as determined using EPA Reference Method 23 in appendix A of this part and the procedures specified in §60.1300.

Twenty-four hour daily average or *24-hour daily average* means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the municipal waste combustion unit operates and combusts municipal solid waste measured during the 24 hours between 12:00 midnight and the following midnight.

Untreated lumber means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

Waterwall furnace means a municipal waste combustion unit that has energy (heat) recovery in the furnace (for example, radiant heat transfer section) of the combustion unit.

Yard waste means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(1) Construction, renovation, and demolition wastes that are exempt from the definition of “municipal solid waste” in this section.

(2) Clean wood that is exempt from the definition of “municipal solid waste” in this section.

Table 1 to Subpart AAAA of Part 60—Emission Limits for New Small Municipal Waste Combustion Units

For the following pollutants	You must meet the following emission limits[a]	Using the following averaging times	And determine compliance by the following methods
1. Organics			
Dioxins/Furans (total mass basis)	13 nanograms per dry standard cubic meter	3-run average (minimum run duration is 4 hours)	Stack test.
2. Metals:			
Cadmium	0.020 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test.
Lead	0.20 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test.
Mercury	0.080 milligrams per dry standard cubic meter or 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)	Stack test.
Opacity	10 percent	Thirty 6-minute averages	Stack test.
Particulate Matter	24 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)	Stack test.
3. Acid Gases:			
Hydrogen Chloride	25 parts per million by dry volume or 95 percent reduction of potential hydrogen chloride emissions	3-run average (minimum run duration is 1 hour)	Stack test
Nitrogen Oxides (Class I units)[b]	150 (180 for 1st year of operation) parts per million by dry volume	24-hour daily block arithmetic average concentration	Continuous emission monitoring system.
Nitrogen Oxides (Class II units)[c]	500 parts per million by dry volume	See footnote[d]	See footnote[d]

For the following pollutants	You must meet the following emission limits[a]	Using the following averaging times	And determine compliance by the following methods
Sulfur Dioxide	30 parts per million by dry volume or 80 percent reduction of potential sulfur dioxide emissions	24-hour daily block geometric average concentration or percent reduction	Continuous monitoring emission system.
4. Other:			
Fugitive Ash	Visible emissions for no more than 5 percent of hourly observation period	Three 1-hour observation periods	Visible emission test.

[a]All emission limits (except for opacity) are measured at 7 percent oxygen.

[b]Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity more than 250 tons per day of municipal solid waste. See §60.1465 for definitions.

[c]Class II units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity no more than 250 tons per day of municipal solid waste. See §60.1465 for definitions.

[d]No monitoring, testing, recordkeeping, or reporting is required to demonstrate compliance with the nitrogen oxides limit for Class II units.

Table 2 to Subpart AAAA of Part 60—Carbon Monoxide Emission Limits for New Small Municipal Waste Combustion Units

For the following municipal waste combustion units	You must meet the following carbon monoxide limits[a]	Using the following averaging times[b]
1. Fluidized-bed	100 parts per million by dry volume	4-hour.
2. Fluidized bed, mixed fuel, (wood/refuse-derived fuel)	200 parts per million by dry volume	24-hour.[c]
3. Mass burn rotary refractory	100 parts per million by dry volume	4-hour.
4. Mass burn rotary waterwall	100 parts per million by dry volume	24-hour.
5. Mass burn waterwall and refractory	100 parts per million by dry volume	4-hour.
6. Mixed fuel-fired (pulverized coal/refuse-derived fuel)	150 parts per million by dry volume	4-hour.
7. Modular starved-air and excess air	50 parts per million by dry volume	4-hour.
8. Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel)	150 parts per million by dry volume	24-hour daily.
9. Stoker, refuse-derived fuel	150 parts per million by dry volume	24-hour daily.

[a]All limits (except for opacity) are measured at 7 percent oxygen. Compliance is determined by continuous emission monitoring systems.

[b]Block averages, arithmetic mean. See §60.1465 for definitions.

[c]24-hour block average, geometric mean. See §60.1465 for definitions.

Table 3 to Subpart AAAA of Part 60—Requirements for Validating Continuous Emission Monitoring Systems (CEMS)

For the following continuous emission monitoring systems	Use the following methods in appendix A of this part to validate pollutant concentration levels	Use the following methods in appendix A of this part to measure oxygen (or carbon dioxide)
1. Nitrogen Oxides (Class I units only)[a]	Method 7, 7A, 7B, 7C, 7D, or 7E	Method 3 or 3A.
2. Sulfur Dioxide	Method 6 or 6C	Method 3 or 3A.
3. Carbon Monoxide	Method 10, 10A, or 10B	Method 3 or 3A.

[a]Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity more than 250 tons per day of municipal solid waste. See §60.1465 for definitions.

Table 4 to Subpart AAAA of Part 60—Requirements for Continuous Emission Monitoring Systems (CEMS)

For the following pollutants	Use the following span values for your CEMS	Use the following performance specifications in appendix B of this part for your CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of this part to collect data
1. Opacity	100 percent opacity	P.S. 1	Method 9.
2. Nitrogen Oxides (Class I units only)[a]	Control device outlet: 125 percent of the maximum expected hourly potential nitrogen oxides emissions of the municipal waste combustion unit	P.S. 2	Method 7E.
3. Sulfur Dioxide	Inlet to control device: 125 percent of the maximum expected sulfur dioxide emissions of the municipal waste combustion unit. Control device outlet: 50 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit	P.S. 2	Method 6C.
4. Carbon Monoxide	125 percent of the maximum expected hourly potential carbon with monoxide emissions of the municipal waste combustion unit	P.S. 4A	Method 10 alternative interference trap.
5. Oxygen or Carbon Dioxide	25 percent oxygen or 25 percent carbon dioxide	P.S. 3	Method 3A or 3B.

[a]Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity more than 250 tons per day of municipal solid waste. See §60.1465 for definitions.

Table 5 to Subpart AAAA of Part 60—Requirements for Stack Tests

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
1. Organics:			
Dioxins/Furans	Method 1	Method 23[a]	The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load.
2. Metals:			
Cadmium	Method 1	Method 29[a]	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Lead	Method 1	Method 29[a]	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Mercury	Method 1	Method 29[a]	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Opacity	Method 9	Method 9	Use Method 9 to determine compliance with opacity limit. 3-hour observation period (thirty 6-minute averages).
Particulate Matter	Method 1	Method 5[a]	The minimum sample Matter volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160 ±14 °C. The minimum sampling time is 1 hour.
3. Acid Gases:[b]			
Hydrogen Chloride	Method 1	Method 26 or 26A[a]	Test runs must be at least 1 hour long while the municipal waste combustion unit is operating at full load.
4. Other:[b]			
Fugitive Ash	Not applicable	Method 22 (visible emissions)	The three 1-hour observation period must include periods when the facility transfers fugitive ash from the municipal waste combustion unit to the area where the fugitive ash is stored or loaded into containers or trucks.

[a]Must simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B in appendix A of this part.

[b]Use CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for quality assurance requirements in appendix F of this part.

Attachment D

Federally Enforceable State Operating Permit (FESOP) No: 151-43439-00067

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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) Remote areas of Alaska; 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.

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AECDs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 81 FR 44219, July 7, 2016]

§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) Remote areas of Alaska; 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; 81 FR 44219, July 7, 2016]

§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.

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDs as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]

§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) [Reserved]

(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 1090.305 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 must use diesel 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; 85 FR 78463, Dec. 4, 2020]

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.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in 40 CFR part 1039 with AECDs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AECDs as allowed by 40 CFR 1039.665 must meet all of the requirements in 40 CFR 1039.665 that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in 40 CFR 89.112 when the AECD is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AECD as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 81 FR 44219, July 7, 2016]

§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.

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

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, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

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:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \qquad (Eq.\ 7)$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_X concentration in ppm.

$1.912x10^{-3}$ = 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:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \qquad (Eq.\ 8)$$

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.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

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 remote areas of Alaska 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 §§60.4201(f) and 60.4202(g).

(c) Manufacturers, owners, and operators of stationary CI ICE that are located in remote areas of Alaska 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 must have that engine certified as meeting at least the Tier 3 PM standards in 40 CFR 89.112 or 40 CFR 1042.101.

(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 remote areas of Alaska.

(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 remote areas of Alaska 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, as amended at 81 FR 44219, July 7, 2016; 84 FR 61568, Nov. 13, 2019]

§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.

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.

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.

Remote areas of Alaska means areas of Alaska that meet either paragraph (1) or (2) of this definition.

(1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).

(2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE 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 CI ICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

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; 81 FR 44219, July 7, 2016]

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]

	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)			
Engine power	**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.

Each	Complying with the requirement to	You must	Using	According to the following requirements
		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.
		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.

Each	Complying with the requirement to	You must	Using	According to the following requirements
		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.
	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.

Each	Complying with the requirement to	You must	Using	According to the following requirements
		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	

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Attachment E

Federally Enforceable State Operating Permit (FESOP) No: 151-43439-00067

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Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Subpart BB—National Emission Standard for Benzene Emissions From Benzene Transfer Operations

Source: 55 FR 8341, Mar. 7, 1990, unless otherwise noted.

§61.300 Applicability.

(a) The affected facility to which this subpart applies is the total of all loading racks at which benzene is loaded into tank trucks, railcars, or marine vessels at each benzene production facility and each bulk terminal. However, specifically exempted from this regulation are loading racks at which only the following are loaded: Benzene-laden waste (covered under subpart FF of this part), gasoline, crude oil, natural gas liquids, petroleum distillates (e.g., fuel oil, diesel, or kerosene), or benzene-laden liquid from coke by-product recovery plants.

(b) Any affected facility under paragraph (a) of this section which loads only liquid containing less than 70 weight-percent benzene is exempt from the requirements of this subpart, except for the recordkeeping and reporting requirements in §61.305(i).

(c) *Comply with standards at each loading rack.* Any affected facility under paragraph (a) of this section shall comply with the standards in §61.302 or as specified in paragraph (f) of this section, if applicable, at each loading rack that is handling a liquid containing 70 weight-percent or more benzene.

(d) Any affected facility under paragraph (a) of this section whose annual benzene loading is less than 1.3 million liters of 70 weight-percent or more benzene is exempt from the requirements of this subpart, except for the recordkeeping and reporting requirements in §61.305(i).

(e) The owner or operator of an affected facility, as defined in §61.300(a) that loads a marine vessel shall be in compliance with the provisions of this subpart on and after July 23, 1991. If an affected facility that loads a marine vessel also loads a tank truck or railcar, the marine vessel loading racks shall be in compliance with the provisions of this subpart on and after July 23, 1991, while the tank truck loading racks and the railcar loading racks shall be in compliance as required by §61.12.

(f) *Alternative means of compliance*—(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart E, to satisfy the requirements of §§61.302 through 61.306 for all tank truck or railcar loading racks that are subject to this subpart. Loading racks are referred to as transfer racks in 40 CFR part 65, subpart E. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1. All marine vessel loading racks shall comply with the provisions in §§61.302 through 61.306.

(2) *Part 61, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart E, must also comply with §§61.01, 61.02, 61.05 through 61.08, 61.10(b) through (d), 61.11, and 61.15 for those loading racks. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (f)(2) do not apply to owners or operators of loading racks complying with 40 CFR part 65, subpart E, 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 E, must comply with 40 CFR part 65, subpart A.

[55 FR 8341, Mar. 7, 1990, as amended at 55 FR 45804, Oct. 31, 1990; 65 FR 78284, Dec. 14, 2000]

§61.301 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, or in subpart A or subpart V of part 61.

Bulk terminal means any facility which receives liquid product containing benzene by pipelines, marine vessels, tank trucks, or railcars, and loads the product for further distribution into tank trucks, railcars, or marine vessels.

Car-sealed means having a seal that is placed on the device used to change the position of a valve (e.g., from open to closed) such that the position of the valve cannot be changed without breaking the seal and requiring the replacement of the old seal, once broken, with a new seal.

Control device means all equipment used for recovering or oxidizing benzene vapors displaced from the affected facility.

Incinerator means any enclosed combustion device that is used for destroying organic compounds and that does not extract energy in the form of steam or process heat. These devices do not rely on the heating value of the waste gas to sustain efficient combustion. Auxiliary fuel is burned in the device and the heat from the fuel flame heats the waste gas to combustion temperature. Temperature is controlled by controlling combustion air or fuel.

Leak means any instrument reading of 10,000 ppmv or greater using Method 21 of 40 CFR part 60, appendix A.

Loading cycle means the time period from the beginning of filling a tank truck, railcar, or marine vessel until flow to the control device ceases, as measured by the flow indicator.

Loading rack means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill tank trucks, railcars, or marine vessels.

Marine vessel means any tank ship or tank barge which transports liquid product such as benzene.

Nonvapor tight means any tank truck, railcar, or marine vessel that does not pass the required vapor-tightness test.

Process heater means a device that transfers heat liberated by burning fuel to fluids contained in tubes, except water that is heated to produce steam.

Steam generating unit means any enclosed combustion device that uses fuel energy in the form of steam.

Vapor collection system means any equipment located at the affected facility used for containing benzene vapors displaced during the loading of tank trucks, railcars, or marine vessels. This does not include the vapor collection system that is part of any tank truck, railcar, or marine vessel vapor collection manifold system.

Vapor-tight marine vessel means a marine vessel with a benzene product tank that has been demonstrated within the preceding 12 months to have no leaks. This demonstration shall be made using Method 21 of part 60, appendix A, during the last 20 percent of loading and during a period when the vessel is being loaded at its maximum loading rate. A reading of greater than 10,000 ppm as methane shall constitute a leak. As an alternative, a marine vessel owner or operator may use the vapor-tightness test described in §61.304(f) to demonstrate vapor tightness. A marine vessel operated at negative pressure is assumed to be vapor-tight for the purpose of this standard.

Vapor-tight tank truck or *vapor-tight railcar* means a tank truck or railcar for which it has been demonstrated within the preceding 12 months that its product tank will sustain a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals. This capability is to be demonstrated using the pressure test procedure specified in Method 27 of appendix A to 40 CFR part 60, and a pressure measurement device which has a precision of ±2.5 mm water and which is capable of measuring above the pressure at which the tank truck or railcar is to be tested for vapor tightness.

[55 FR 8341, Mar. 7, 1990, as amended at 65 FR 62159, Oct. 17, 2000]

§61.302 Standards.

(a) The owner or operator of an affected facility shall equip each loading rack with a vapor collection system that is:

(1) Designed to collect all benzene vapors displaced from tank trucks, railcars, or marine vessels during loading, and

(2) Designed to prevent any benzene vapors collected at one loading rack from passing through another loading rack to the atmosphere.

(b) The owner or operator of an affected facility shall install a control device and reduce benzene emissions routed to the atmosphere through the control device by 98 weight percent. If a boiler or process heater is used to comply with the percent reduction requirement, then the vent stream shall be introduced into the flame zone of such a device.

(c) The owner or operator of an affected facility shall operate any flare used to comply with paragraph (b) of this section in accordance with the requirements of §60.18 (b) through (f).

(d) The owner or operator of an affected facility shall limit loading of benzene into vapor-tight tank trucks and vapor-tight railcars using the following procedures:

(1) The owner or operator shall obtain the vapor-tightness documentation described in §61.305(h) for each tank truck or railcar loaded at the affected facility. The test date in the documentation must be within the preceding 12 months. The vapor-tightness test to be used for tank trucks and railcars is Method 27 of appendix A to 40 CFR part 60.

(2) The owner or operator shall cross-check the identification number for each tank truck or railcar to be loaded with the file of vapor-tightness documentation before the corresponding tank truck or railcar is loaded. If no documentation is on file, the owner or operator shall obtain a copy of the information from the tank truck or railcar operator before the tank truck or railcar is loaded.

(3) Alternate procedures to those described in paragraphs (d)(1) and (d)(2) of this section may be used upon application to, and approval by, the Administrator.

(e) The owner or operator of an affected facility shall limit the loading of marine vessels to those vessels that are vapor tight as determined by either paragraph (e)(1), (e)(2), (e)(3), or (e)(4) of this section.

(1) The owner or operator of an affected facility shall ensure that each marine vessel is loaded with the benzene product tank below atmospheric pressure (i.e., at negative pressure). If the pressure is measured at the interface between the shoreside vapor collection pipe and the marine vessel vapor line, the pressure measured according to the procedures in §61.303(f) must be below atmospheric pressure.

(2) The owner or operator of an affected facility shall use the following procedure to obtain the vapor-tightness documentation described in §61.305(h). The vapor-tightness test for marine vessels is Method 21 of appendix A to 40 CFR part 60, and shall be applied to any potential sources of vapor leaks. A reading of 10,000 ppmv or greater as methane shall constitute a leak.

(i) The owner or operator of an affected facility shall obtain the leak test documentation described in §61.305(h) for each marine vessel prior to loading, if available. The date of the test listed in the documentation must be within the 12 preceding months.

(ii) If there is no documentation of a successful leak test conducted on the marine vessel in the preceding 12 months, the owner or operator of an affected facility shall require that a leak test of the marine vessel be conducted during the final 20 percent of loading of the marine vessel or shall not load the vessel. The test shall be conducted when the marine vessel is being loaded at the maximum allowable loading rate.

(A) If no leak is detected, the owner or operator of an affected facility shall require that the documentation described in §61.305(h) is completed prior to departure of the vessel. The owner or operator of the affected facility shall retain a copy of the vapor-tightness documentation on file.

(B) If any leak is detected, the owner or operator of an affected facility shall require that the vapor-tightness failure be documented for the marine vessel owner or operator prior to departure of the vessel. The owner or operator of the affected facility shall retain a copy of the vapor-tightness documentation on file. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without dry-docking the vessel. This equipment will be excluded from future Method 21 of appendix A to 40 CFR part 60 tests until repairs are effected. Repair of this equipment shall occur the next time the vessel is dry-docked.

(iii) If the marine vessel has failed its most recent vapor-tightness test as described in §61.302(e)(2)(ii), the owner or operator of the affected facility shall require that the owner or operator of the nonvapor-tight marine vessel provide documentation that the leaks detected during the previous vapor-tightness test have been repaired, or proof that repair is technically infeasible without dry-docking the vessel. Once the repair documentation has been provided, the owner or operator may load the marine vessel. The owner or operator shall require that the vapor-tightness test described in §61.302(e)(2)(ii) be conducted during loading, and shall retain a copy of the vapor-tightness documentation on file.

(3) The owner or operator of an affected facility shall obtain a copy of the marine vessel's vapor-tightness documentation described in §61.305(h) for a test conducted within the preceding 12 months in accordance with §61.304(f).

(4) Alternate procedures to those described in paragraphs (e)(1), (e)(2) and (e)(3) of this section may be used upon application to, and approval by, the Administrator.

(f) The owner or operator of an affected facility shall limit loading of benzene to tank trucks, railcars, and marine vessels equipped with vapor collection equipment that is compatible with the affected facility's vapor collection system.

(g) The owner or operator of an affected facility shall limit loading of tank trucks, railcars, and marine vessels to tank trucks, railcars, and marine vessels whose collection systems are connected to the affected facility's vapor collection systems.

(h) The owner or operator of an affected facility shall ensure that the vapor collection and benzene loading equipment of tank trucks and railcars shall be designed and operated to prevent gauge pressure in the tank truck or railcar tank from exceeding, during loading, the initial pressure the tank was pressured up to and shown to be vapor tight at during the most recent vapor-tightness test using Method 27 of appendix A to 40 CFR part 60. This vapor-tightness test pressure is not to be exceeded when measured by the procedures specified in §61.304(c).

(i) The owner or operator of an affected facility shall ensure that no pressure-vacuum vent in the affected facility's vapor collection system for tank trucks and railcars shall begin to open at a system pressure less than the maximum pressure at which the tank truck or railcar is operated.

(j) The owner or operator of an affected facility shall ensure that the maximum normal operating pressure of the marine vessel's vapor collection equipment shall not exceed 0.8 times the relief set pressure of the pressure-vacuum vents. This level is not to be exceeded when measured by the procedures specified in §61.304(d).

(k) The owner or operator of an affected facility shall inspect the vapor collection system and the control device for detectable emissions, and shall repair any leaks detected, in accordance with §61.242-11 (e) and (f). This inspection of the vapor collection system and control device shall be done during the loading of tank trucks, railcars, or marine vessels.

(l) Vent systems that contain valves that could divert a vent stream from a control device shall have car-sealed opened all valves in the vent system from the emission source to the control device, and car-sealed closed all valves in the vent system that would lead the vent stream to the atmosphere, either directly or indirectly, bypassing the control device.

[55 FR 8341, Mar. 7, 1990, as amended at 65 FR 62159, Oct. 17, 2000]

§61.303 Monitoring requirements.

(a) Each owner or operator of an affected facility that uses an incinerator to comply with the percent reduction requirement specified under §61.302(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications a temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the combustion temperature being measured expressed in degrees Celsius or ±0.5 °C, whichever is greater.

(1) Where an incinerator other than a catalytic incinerator is used, the owner or operator of the affected facility shall install a temperature monitoring device in the firebox.

(2) Where a catalytic incinerator is used, the owner or operator shall install temperature monitoring devices in the gas stream immediately before and after the catalyst bed.

(b) Each owner or operator of an affected facility that uses a flare to comply with §61.302(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate the presence of a flame during the entire loading cycle.

(c) Each owner or operator of an affected facility that uses a steam generating unit or process heater to comply with §61.302(b) shall comply with the following requirements. Where a steam generating unit with a design heat input capacity of less than 44 MW (150×10^6 BTU/hr) is used to comply with §61.302(b), the owner or operator of an affected facility shall comply with paragraph (c)(1) of this section. Where a steam generating unit or process heater with a design heat input capacity of 44 MW (150×10^6 BTU/hr) or greater is used to comply with §61.302(b), the owner or operator of an affected facility shall comply with paragraph (c)(2) of this section.

(1) Install in the firebox, calibrate, maintain, and operate according to manufacturer's specifications a temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 °C, whichever is greater, for steam generating units or process heaters of less than 44 MW (150×10^6 BTU/hr) design heat input capacity.

(2) Monitor and record the periods of operation of the steam generating units or process heater if the design heat input capacity of the steam generating unit or process heater is 44 MW (150×10^6 BTU/hr) or greater. The records must be readily available for inspection.

(d) Each owner or operator of an affected facility that uses a carbon adsorption system to comply with the percent reduction requirement specified under §61.302(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications a device that continuously indicates and records the concentration or reading of organic compounds in the outlet gas stream of each carbon adsorber bed.

(e) The owner or operator of an affected facility who wishes to demonstrate compliance with the standards specified under §61.302(b) using control devices other than an incinerator, steam generating unit, process heater, carbon adsorber, or flare shall provide the Administrator with information describing the operation of the control device and the process parameter(s) that would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

(f) Each owner or operator of an affected facility complying with §61.302(e)(1) shall install, calibrate, maintain, and operate a recording pressure measurement device (magnehelic gauge or equivalent device) and an audible and visible alarm system that is activated when the pressure vacuum specified in §61.302(e)(1) is not attained. The owner or operator shall place the alarm system so that it can be seen and heard where cargo transfer is controlled and on the open deck.

(g) Owners or operators using a vent system that contains valves that could divert a vent stream from a control device used to comply with the provisions of this subpart shall do one or a combination of the following:

(1) Install a flow indicator immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere. The flow indicator shall be capable of recording flow at least once every 15 minutes.

(2) Monitor the valves once a month, checking the position of the valves and the condition of the car seal, and identify all times when the car seals have been broken and the valve position has been changed (*i.e.,* from opened to closed for valves in the vent piping to the control device and from closed to open for valves that allow the stream to be vented directly or indirectly to the atmosphere).

[55 FR 8341, Mar. 7, 1990, as amended at 65 FR 62159, Oct. 17, 2000]

§61.304 Test methods and procedures.

(a) The procedures for determining compliance with §61.302(b) for all control devices other than flares is as follows:

(1) All testing equipment shall be prepared and installed as specified in the appropriate test methods.

(2) The time period for a performance test shall be not less than 6 hours, during which at least 300,000 liters of benzene are loaded. If the throughput criterion is not met during the initial 6 hours, the test may be either continued until the throughput criterion is met, or resumed the next day with at least another 6 complete hours of testing.

(3) For intermittent control devices:

(i) The vapor holder level of the intermittent control device shall be recorded at the start of the performance test. The end of the performance test shall coincide with the time when the vapor holder is at its original level.

(ii) At least two startups and shutdowns of the control device shall occur during the performance test. If this does not occur under an automatically controlled operation, the system shall be manually controlled.

(4) An emission testing interval shall consist of each 5-minute period during the performance test. For each interval:

(i) The reading from each measurement instrument shall be recorded.

(ii) Method 1 or 1A of part 60, appendix A, as appropriate, shall be used for selection of the sampling site,

(iii) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D of part 60, appendix A, as appropriate.

(iv) The average benzene concentration upstream and downstream of the control device in the vent shall be determined using Method 25A or Method 25B of appendix A of this part, using benzene as the calibration gas. The average benzene concentration shall correspond to the volume measurement by taking into account the sampling system response time.

(5) The mass emitted during each testing interval shall be calculated as follows:

$M_i = FKV_S\ C$

where:

M_i = Mass of benzene emitted during testing interval i, kg.

V_s = Volume of air-vapor mixture exhausted, m^3 at standard conditions.

C = Benzene concentration (as measured) at the exhaust vent, ppmv.

K = Density, (kg/m^3 benzene), standard conditions.

K = 3.25 for benzene.

F = Conversion factor, (m^3 benzene/m^3 air)(1/ppmv).

$F = 10/^{-6}/$.

s = Standard conditions, 20 °C and 760 mm Hg.

(6) The benzene mass emission rates before and after the control device shall be calculated as follows:

$$E = \frac{\sum_{i=1}^{n} M_i}{T}$$

where:

E = Mass flow rate of benzene emitted, kg/hr.

M_i = Mass of benzene emitted during testing interval i, kg.

T = Total time of all testing intervals, hr.

n = Number of testing intervals.

(7) The percent reduction across the control device shall be calculated as follows:

$$R = \frac{E_b - E_a}{E_b}(100)$$

where:

R = Control efficiency of control device, %.

E_b = Mass flow rate of benzene prior to control device, kg/hr.

E_a = Mass flow rate of benzene after control device, kg/hr.

(b) When a flare is used to comply with §61.302(b), a performance test according to Method 22 of appendix A of 40 CFR part 60 shall be performed to determine visible emissions. The observation period shall be at least 2 hours. Performance testing shall be conducted during at least three complete loading cycles with a separate test run for each loading cycle. The observation period for detecting visible emissions shall encompass each loading cycle. Integrated sampling to measure process vent stream flow rate shall be performed continuously during each loading cycle.

(c) For the purpose of determining compliance with §61.302(h), the following procedures shall be used:

(1) Calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), which has a precision of ±2.5 mm H_20 in the range that the tank truck or railcar was initially pressured to during the most recent vapor-tightness test.

(2) Connect the pressure measurement device to a pressure tap in the affected facility's vapor collection system, located as close as possible to the connection with the tank truck or railcar.

(3) During the performance test, record the pressure every 5 minutes while a tank truck or railcar is being loaded, and record the highest instantaneous pressure that occurs during each loading cycle. Every loading rack shall be tested at least once during the performance test.

(4) If more than one loading rack is used simultaneously, then the performance test shall be conducted simultaneously to represent the maximum capacity.

(d) For the purpose of determining compliance with §61.302(j), the following procedures shall be used:

(1) Calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to the relief set pressure of the pressure-vacuum vents.

(2) Connect the pressure measurement device to a pressure tap in the affected facility's vapor collection system, located as close as possible to the connection with the marine vessel.

(3) During the performance test, record the pressure every 5 minutes while a marine vessel is being loaded, and record the highest instantaneous pressure that occurs during each loading cycle.

(e) Immediately prior to a performance test required for determination of compliance with §61.302(b), all potential sources of vapor leakage in the affected facility's vapor collection system equipment shall be inspected for detectable emissions as required in §61.302(k). The monitoring shall be conducted only while a vapor-tight tank truck, railcar, or marine vessel is being loaded. All identified leaks in the terminal's vapor collection system shall be repaired prior to conducting the performance test.

(f) The following test method shall be used to comply with the marine vessel vapor-tightness requirements of §61.302(e)(3):

(1) Each benzene product tank shall be pressurized with dry air or inert gas to not less than 1.0 psig and not more than the pressure of the lowest relief valve setting.

(2) Once the pressure is obtained, the dry air or inert gas source shall be shut off.

(3) At the end of one-half hour, the pressure in the benzene product tank and piping shall be measured. The change in pressure shall be calculated using the following formula:

$\Delta P = P_i — P_f$

where:

ΔP = Change in pressure, inches of water.

P_i = Pressure in tank when air/gas source is shut off, inches of water.

P_f = Pressure in tank at the end of one-half hour after air/gas source is shut off, inches of water.

(4) The change in pressure, ΔP, shall be compared to the pressure drop calculated using the following formula:

$\Delta PM = 0.861\ P_{ia}\ L/V$

where:

ΔPM = Maximum allowable pressure change, inches of water.

P_{ia} = Pressure in tank when air/gas source is shut off, pounds per square inch, absolute (psia).

L = Maximum permitted loading rate of vessel, barrels per hour.

V = Total volume of product tank, barrels.

(5) If ΔP≤ΔPM, the vessel is vapor tight.

(6) If ΔP>ΔPM, the vessel is not vapor tight and the source of the leak must be identified and repaired prior to retesting.

[55 FR 8341, Mar. 7, 1990; 55 FR 12444, Apr. 3, 1990, as amended at 65 FR 62159, Oct. 17, 2000]

§61.305 Reporting and recordkeeping.

(a) Each owner or operator of an affected facility subject to the provisions of this subpart shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under §61.13. Where a steam generating unit or process heater with a design heat input capacity of 44 MW (150×10^6 BTU/hr) or greater is used to comply with §61.302(b), a report containing performance test data need not be submitted, but a report containing the information in §61.305(a)(3)(i) is required.

(1) Where an owner or operator subject to the provisions of this subpart is complying with §61.302(b) through use of an incinerator:

(i) The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed), measured at least every 2 minutes during a loading cycle if the total time period of the loading cycle is less than 3 hours and every 15 minutes if the total time period of the loading cycle is equal to or greater than 3 hours. The measured temperature shall be averaged over the loading cycle.

(ii) The percent reduction of benzene determined as specified in §61.304(a) achieved by the incinerator.

(iii) The duration of the loading cycle.

(2) Where an owner or operator subject to the provisions of this subpart is complying with §61.302 (b) and (c) through use of a smokeless flare or other flare design (i.e., steam-assisted, air-assisted or nonassisted), all visible emission readings, heat content determination, flow rate measurements, maximum permitted velocity calculations, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring measured continuously during the loading cycle, duration of all loading cycles and records of all loading cycles during which the pilot flame is absent for each vent stream.

(3) Where an owner or operator subject to the provisions of this subpart is complying with §61.302(b) through the use of a steam generating unit or process heater:

(i) A description of the location at which the vent stream is introduced into the steam generating unit or process heater.

(ii) The average combustion temperature of the steam generating unit or process heater with a design heat input capacity of less than 44 MW (150×10^6 BTU/hr), measured with the following frequency: at least every 2 minutes during a loading cycle if the total time period of the loading cycle is less than 3 hours, and every 15 minutes if the total time period of the loading cycle is equal to or greater than 3 hours. The measured temperature shall be averaged over the loading cycle.

(iii) The duration of the loading cycle.

(4) Where an owner or operator subject to the provisions of this subpart is complying with §61.302(b) through the use of a carbon adsorption system, the control efficiency, R, of the carbon adsorption system, and all supporting performance test data and calculations used to determine that value.

(5) Each owner or operator subject to the provisions of this subpart shall submit with the initial performance test an engineering report describing in detail the vent system used to vent each affected vent stream to a control device. This report shall include all valves and vent pipes that could vent the stream to the atmosphere, thereby bypassing the control device, and identify which valves are car-sealed opened and which valves are car-sealed closed.

(b) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under §61.303 (a), (c), and (d) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows:

(1) For thermal incinerators, all loading cycles during which the average combustion temperature was more than 28 °C (50 °F) below the average loading cycle combustion temperature during the most recent performance test at which compliance with §61.302(b) was determined.

(2) For catalytic incinerators, all loading cycles during which the average temperature of the vent stream immediately before the catalyst bed is more than 28 °C (50 °F) below the average temperature of the process vent stream during loading cycles during the most recent performance test at which compliance with §61.302(b) was determined.

(3) All loading cycles during which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature during the most recent performance test at which compliance with §61.302(b) was determined for steam generating units or process heaters with a design heat input capacity of less than 44 MW (150 × 10^6 BTU/hr).

(4) For steam generating units or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under §61.302(b).

(5) For carbon adsorbers, all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20 percent greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the facility was in compliance.

(c) If a vent system containing valves that could divert the emission stream away from the control device is used, each owner or operator subject to the provisions of this subpart shall keep for at least 2 years up-to-date, readily accessible continuous records of:

(1) All periods when flow is indicated if flow indicators are installed under §61.303(g)(1).

(2) All times when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is changed (i.e., from open to closed for valves in the vent piping to the control device and from closed to open for valves that vent the stream directly or indirectly to the atmosphere bypassing the control device) if valves are monitored under §60.303(g)(2).

(d) Each owner or operator of an affected facility subject to the provisions of this subpart who uses a steam generating unit or process heater with a design heat input capacity of 44 MW (150 × 10^6 BTU/hr) or greater to comply with §61.302(b) shall keep an up-to-date, readily accessible record of all periods of operation of the steam generating unit or process heater. Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State or Federal regulatory requirements.

(e) Each owner or operator of an affected facility subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the flare pilot flame monitoring specified under §61.303(b), as well as up-to-date, readily accessible records of any absence of the pilot flame during a loading cycle.

(f) Each owner or operator of an affected facility subject to the requirements of §61.302 shall submit to the Administrator quarterly reports of the following information. The owner or operator shall submit the initial report within 90 days after the effective date of this subpart or 90 days after startup for a source that has an initial startup date after the effective date.

(1) Periods of operation where there were exceedances of monitored parameters recorded under §61.305(b).

(2) All periods recorded under §61.305(c)(1) when the vent stream is diverted from the control device.

(3) All periods recorded under §61.305(d) when the steam generating unit or process heater was not operating.

(4) All periods recorded under §61.305(e) in which the pilot flame of the flare was absent.

(5) All times recorded under §61.305(c)(2) when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is changed.

(g) The owner or operator of an affected facility shall keep the vapor-tightness documentation required under §61.302 (d) and (e) on file at the affected facility in a permanent form available for inspection.

(h) The owner or operator of an affected facility shall update the documentation file required under §61.302 (d) and (e) for each tank truck, railcar, or marine vessel at least once per year to reflect current test results as determined by the appropriate method. The owner or operator shall include, as a minimum, the following information in this documentation:

(1) Test title;

(2) Tank truck, railcar, or marine vessel owner and address;

(3) Tank truck, railcar, or marine vessel identification number;

(4) Testing location;

(5) Date of test;

(6) Tester name and signature;

(7) Witnessing inspector: name, signature, and affiliation; and

(8) Test results, including, for railcars and tank trucks, the initial pressure up to which the tank was pressured at the start of the test.

(i) Each owner or operator of an affected facility complying with §61.300(b) or §61.300(d) shall record the following information. The first year after promulgation the owner or operator shall submit a report containing the requested information to the Director of the Emission Standards Division, (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. After the first year, the owner or operator shall continue to record; however, no reporting is required. The information shall be made available if requested. The information shall include, as a minimum:

(1) The affected facility's name and address;

(2) The weight percent of the benzene loaded;

(3) The type of vessel loaded (i.e., tank truck, railcar, or marine vessel); and

(4) The annual amount of benzene loaded into each type of vessel.

[55 FR 8341, Mar. 7, 1990, as amended at 65 FR 62159, Oct. 17, 2000]

§61.306 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: No restrictions.

Attachment F

Federally Enforceable State Operating Permit (FESOP) No: 151-43439-00067

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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 1090.305 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 1090.305 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 1090.305 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, as amended at 85 FR 78463, Dec. 4, 2020]

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:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq.\ 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq.\ 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and

outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

CONTINUOUS COMPLIANCE REQUIREMENTS

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on

an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

NOTIFICATIONS, REPORTS, AND RECORDS

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(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, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(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; 85 FR 73912, Nov. 19, 2020]

§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	
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	
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.	
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.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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]	
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.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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.

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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.	
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	

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 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	
	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	

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.	
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	
	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:

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)[a] [c] (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)[a b] [c] (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)[a c], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]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
		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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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.
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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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
		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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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.
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.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
		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).
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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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.	
§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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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.
§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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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.	
§63.9(k)	Electronic reporting procedures	Yes	Only as specified in §63.9(j).
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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; 85 FR 73912, Nov. 19, 2020]

Appendix A to Subpart ZZZZ of Part 63—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											
″											
″											
″											
″											

Facility_____ Engine I.D._____ Date_____											
Measurement Data Phase											
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Refresh Phase											
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[78 FR 6721, Jan. 30, 2013]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Description and Location

Source Name:	**Brightmark Plastics Renewal Indiana 2 LLC**
Source Location:	**3240 W 800 S, Ashley, Indiana 46705**
County:	**Steuben**
SIC Code:	**2999 (Products of Petroleum and Coal, N.E.C.)**
Permit Renewal No.:	**F 151-43439-00067**
Permit Reviewer:	**Wyman Clark**

On October 30, 2020, Brightmark Plastics Renewal Indiana 2 LLC submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Brightmark Plastics Renewal Indiana 2 LLC relating to the operation of a stationary plastics to fuel processing plant. Brightmark Plastics Renewal Indiana 2 LLC was issued its FESOP (F 151-36464-00067) on August 3, 2016.

Existing Approvals

The source was issued FESOP No. F 151-36464-00067 on August 3, 2016. The source has since received the following approval:

Significant Permit Revision No. 151-39409-00067 on June 6, 2018.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) Feedstock Preparation System, identified as FPS 1, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(1) Unloading plastic from trucks to a tipping floor.

(2) One (1) elevating belt conveyor, identified as FPS1-010, with a maximum rated capacity of 6.615 tons per hour, loaded by front end loader from the tipping floor.

(3) One (1) horizontal initial sort belt conveyor, identified as FPS1-020, with a maximum rated capacity of 6.615 tons per hour, with a magnet for metal removal.

(4) One (1) elevating belt conveyor, identified as FPS1-040, with a maximum rated capacity of 6.615 tons per hour, loading the pre-shredder.

(5) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS1-Preshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(6) One (1) elevating belt conveyor, identified as FPS1-060, with a maximum rated capacity of 6.615 tons per hour, to final sort and metal removal.

(7) One (1) horizontal belt conveyor, identified as FPS1-070, with a maximum rated capacity of 6.615 tons per hour, for final sort and metal removal by a magnet.

(8) One (1) elevating belt conveyor, identified as FPS1-080, with a maximum rated capacity of 6.615 tons per hour, loading the re-shredder.

(9) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS1-Reshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(10) One (1) elevating belt conveyor, identified as FPS1-110, with a maximum rated capacity of 6.615 tons per hour, transferring material from re-shredding to the dryer,

(11) One (1) Witte fluidized bed dryer, identified as FPS1-Dryer, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-1.

(12) One (1) elevating belt conveyor, identified as FPS1-130, with a maximum rated capacity of 6.615 tons per hour, transferring material from FPS1-Dryer to the pelletizer.

(13) One (1) Vecoplan model 660 pelletizer, identified as FPS1-Pelletizer, forming pellets of shredded plastic by mechanical compression, with a maximum capacity of 6.00 tons per hour, using no control and exhausting indoors.

(14) One (1) elevating belt conveyor, identified as FPS1-160, with a maximum rated capacity of 6.615 tons per hour, transferring pellets from the pelletizer to FPS1 pellet loader hopper or FPS1-Bin.

(15) One (1) storage bin for plastic pellets, identified as FPS1-Bin, with a maximum capacity of 432 tons.

(16) One (1) pellet load hopper and elevating belt pellet loader conveyor, identified as FPS1-170, with a maximum rated capacity of 6.615 tons per hour, receiving pellets from conveyor FPS1-160, or via front end loader from FPS1-Bin or FPS2-Bin.

(17) One (1) elevating belt conveyor, identified as FPS1-180, from the pellet loader conveyor to the extruder feed conveyors.

(18) One (1) horizontal belt conveyor, identified as FPS1-190-1, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 1.

(19) One (1) horizontal belt conveyor, identified as FPS1-190-2, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 2.

(20) One (1) horizontal belt conveyor, identified as FPS1-190-5, constructed in 2020, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS1 Extruder 5.

(b) Three (3) Plastics Conversion Systems; identified as PCU 1 - North, PCU 2 - North, and PCU 5 - North; and collectively identified as Plastics Conversion Line 1, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(1) Two (2) Bonnot Co. extruders, identified as FPS1 Extruder 1 (for processor PCU 1 - North) and FPS1 Extruder 2 (for processor PCU 2 - North), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, each, using no control with fugitive emissions exhausting to the atmosphere.

(2) One (1) Fulton Model FT-0800HC hot oil heater, identified as FPS1 Hot Oil Heater, fueled by natural gas and/or process fuel gas, constructed in 2020, with a maximum heat input capacity of 6.00 MMBtu/hr, providing heat to FPS1 Extruder 1 and FPS1 Extruder 2, using no control with combustion products exhausting to stack Hot Oil 1.

(3) Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

Under 40 CFR 60, Subpart RRR, processors R-12001 and R-22001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-12001 and R-22001 are affected facilities.

(4) One (1) Bonnot Co. extruder, identified as FPS1 Extruder 5 (for processor PCU 5 - North), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, using no control with fugitive emissions exhausting to the atmosphere.

(5) One (1) plastics-to-fuel processor, identified as R-52001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 5.

Under 40 CFR 60, Subpart RRR, processor R-52001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-52001 is an affected facility.

(c) One (1) Feedstock Preparation System, identified as FPS 2, constructed in 2020, with a maximum input capacity of 6.00 tons (dry) of plastic per hour, consisting of:

(1) Unloading plastic from trucks to a tipping floor.

(2) One (1) elevating belt conveyor, identified as FPS2-010, with a maximum rated capacity of 6.615 tons per hour, loaded by front end loader from the tipping floor.

(3) One (1) horizontal initial sort belt conveyor, identified as FPS2-020, with a maximum rated capacity of 6.615 tons per hour, with a magnet for metal removal.

(4) One (1) elevating belt conveyor, identified as FPS2-040, with a maximum rated capacity of 6.615 tons per hour, loading the pre-shredder.

(5) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS2-Preshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(6) One (1) elevating belt conveyor, identified as FPS2-060, with a maximum rated capacity of 6.615 tons per hour, to final sort and metal removal.

(7) One (1) horizontal belt conveyor, identified as FPS2-070, with a maximum rated capacity of 6.615 tons per hour, for final sort and metal removal by a magnet.

(8) One (1) elevating belt conveyor, identified as FPS2-080, with a maximum rated capacity of 6.615 tons per hour, loading the re-shredder.

(9) One (1) Vecoplan VAZ1800-XL-FF-F-T rotary shredder, identified as FPS2-Reshred, with a maximum capacity of 13,230 pounds per hour, using baghouse DC-1 as control, and exhausting to stack DC-1.

(10) One (1) elevating belt conveyor, identified as FPS2-110, with a maximum rated capacity of 6.615 tons per hour, transferring material from re-shredding to the dryer,

(11) One (1) Witte fluidized bed dryer, identified as FPS2-Dryer, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.50 MMBtu/hr, with process emissions and combustion products exhausting through a material recovery cyclone to stack Dryer-2.

(12) One (1) elevating belt conveyor, identified as FPS2-130, with a maximum rated capacity of 6.615 tons per hour, transferring material from FPS2-Dryer to the pelletizer.

(13) One (1) Vecoplan model 660 pelletizer, identified as FPS2-Pelletizer, forming pellets of shredded plastic by mechanical compression, with a maximum capacity of 6.00 tons per hour, using no control and exhausting indoors.

(14) One (1) elevating belt conveyor, identified as FPS2-160, with a maximum rated capacity of 6.615 tons per hour, transferring pellets from the pelletizer to FPS1 pellet loader hopper or FPS2-Bin.

(15) One (1) storage bin for plastic pellets, identified as FPS2-Bin, with a maximum capacity of 432 tons.

(16) One (1) pellet load hopper and elevating belt pellet loader conveyor, identified as FPS2-170, with a maximum rated capacity of 6.615 tons per hour, receiving pellets from conveyor FPS2-160, or via front end loader from FPS1-Bin or FPS2-Bin.

(17) One (1) elevating belt conveyor, identified as FPS2-180, from the pellet loader conveyor to the extruder feed conveyors.

(18) One (1) horizontal belt conveyor, identified as FPS2-190-3, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 3.

(19) One (1) horizontal belt conveyor, identified as FPS2-190-4, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 4.

(20) One (1) horizontal belt conveyor, identified as FPS2-190-6, constructed in 2020, with a maximum rated capacity of 3.31 tons per hour, feeding pellets to FPS2 Extruder 7.

(d) Three (3) Plastics Conversion Systems; identified as PCU 3 - South, PCU 4 - South, and PCU 7 - South; and collectively identified as Plastics Conversion Line 2, with a bottlenecked capacity of 52,560 tons of plastic pellets per year; consisting of:

(1) Two (2) Bonnot Co. extruders, identified as FPS2 Extruder 3 (for processor PCU 3 - South) and FPS2 Extruder 4 (for processor PCU 4 - South), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, each, using no control with fugitive emissions exhausting to the atmosphere.

(2) One (1) Fulton Model FT-0800HC hot oil heater, identified as FPS2 Hot Oil Heater, fueled by natural gas and/or process fuel gas, constructed in 2020, with a maximum heat input capacity of 6.00 MMBtu/hr, providing heat to FPS2 Extruder 3 and FPS2 Extruder 4, using no control with combustion products exhausting to stack Hot Oil 2.

(3) Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

Under 40 CFR 60, Subpart RRR, processors R-32001 and R-42001 are affected facilities.

Under 40 CFR 60, Subpart AAAA, processors R-32001 and R-42001 are affected facilities.

(4) One (1) Bonnot Co. extruder, identified as FPS2 Extruder 7 (for processor PCU 7 - South), constructed in 2020, with a maximum capacity of 6,000 pounds per hour, using no control with fugitive emissions exhausting to the atmosphere.

(5) One (1) plastics-to-fuel processor, identified as R-72001, constructed in 2020, with a maximum capacity of 6,000 pounds of plastic per hour, using a vapor management system as control for process emissions. The processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 7.

Under 40 CFR 60, Subpart RRR, processor R-72001 is an affected facility.

Under 40 CFR 60, Subpart AAAA, processor R-72001 is an affected facility.

(e) One (1) Vapor Management System separating produced liquids from non-condensable vapor, consisting of:

(1) One (1) Direct Contact Cooler System, identified as PFD-13101, constructed in 2020, with a maximum capacity of 1,300 gallons of hydrocarbon liquids per hour, serving Processors R-12001, R-22001, and R-52001, consisting of:

(A) One (1) direct contact cooler tower, identified as T-13101, discharging vapor to VMS Overhead Condenser #1 and bottoms to the VMS Bottoms Cooler or VMS Heavy Hydrocarbon Cooler E-13102.

(B) One (1) Therminol-cooled VMS bottoms cooler, identified as E-13101, discharging to T-13101.

(C) One (1) VMS heavy hydrocarbon cooler, identified as E-13102, discharging to the wax extraction feed tank (TK-15121).

(D) One (1) air-cooled VMS heavy hydrocarbon Therminol cooler, identified as E-13103.

(E) One (1) VMS heavy hydrocarbon cooler Therminol expansion tank, identified as V-13102.

(F) One (1) air-cooled VMS overhead condenser #1, identified as E-13104, discharging to E-13105.

(G) One (1) water-cooled VMS overhead condenser #2, identified as E-13105, discharging to V-13101.

(H) One (1) VMS accumulator, identified as V-13101, discharging non-condensable vapor to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201), medium hydrocarbon to the hydrotreater feed tank (TK-15101) in the tank farm, and wastewater to wastewater treatment.

(2) One (1) Direct Contact Cooler System, identified as PFD-33101, constructed in 2020 and 2021, with a maximum capacity of 1,300 gallons of hydrocarbon liquids per hour, serving Processors R-32001, R-42001, and R-72001, consisting of:

(A) One (1) direct contact cooler tower, identified as T-33101, discharging vapor to VMS Overhead Condenser #1 and bottoms to the VMS Bottoms Cooler or VMS Heavy Hydrocarbon Cooler E-13102.

(B) One (1) VMS bottoms cooler, identified as E-33101, discharging to T-33101.

(C) One (1) air-cooled VMS overhead condenser #1, identified as E-33104, discharging to E-33105.

(D) One (1) water-cooled VMS overhead condenser #2, identified as E-33105, discharging to V-33101.

(E) One (1) VMS accumulator, identified as V-33101, discharging noncondensable gases to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201), medium hydrocarbon to the hydrotreater feed tank (TK-15101) in the tank farm, and wastewater to wastewater treatment.

(3) One (1) VMS and Hydrotreating Fuel Gas H_2S Removal System, identified as PFD-13201, constructed in 2020 and 2021, consisting of:

(A) One (1) hot oil heated hydrogenation pre-heater, identified as E-13203.

(B) One (1) hydrolysis reactor, identified as V-13201.

Under 40 CFR 60, Subpart RRR, V-13201 is an affected facility.

(C) One (1) tower water-cooled VMS fuel gas cooler, identified as E-13201.

(D) Two (2) H_2S treaters operating in series, identified as V-13202A and V-13202B.

Under 40 CFR 60, Subpart RRR, V-13202A and V-13202B are affected facilities.

(E) One (1) chilled water cooled VMS fuel gas chiller, identified as E-13202.

(F) One (1) fuel gas flash drum, identified as V-13203, discharging to the process fuel gas header.

(f) One (1) Hydrotreater System, identified as PFD-14101, constructed in 2020 and 2021, with a maximum throughput of 2,016 gallons of fuel liquids per hour, consisting of:

(1) One (1) hydrogen exchanger, identified as E-14101.

(2) One (1) hot separator, identified as V-14101.

(3) One (1) feed product exchanger, identified as E-14105.

(4) One (1) diolefins reactor, identified as R-14101.

Under 40 CFR 60, Subpart RRR, R-14101 is an affected facility.

(5) Two (2) combined feed exchangers, identified as E-14102A and B.

(6) One (1) hydrotreater charge heater, identified as H-14101, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 1.43 MMBtu/hr, using no control with combustion products exhausting to stack Hydrotreater Heater.

(7) One (1) hydrotreater bed, identified as R-14102.

Under 40 CFR 60, Subpart RRR, R-14102 is an affected facility.

(8) One (1) air-cooled hot separator vapor cooler, identified as E-14103.

(9) One (1) air-cooled hot separator cooler, identified as E-14106.

(10) One (1) cold separator, identified as V-14102.

(11) One (1) hydrotreater product flash drum, identified as V-14103, discharging gases to the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201) and hydrocarbon liquids to the fractionator feed tank (TK-15111) in the tank farm.

(g) One (1) Steam Methane Reformer, constructed in 2020 and 2021, supplying hydrogen to the Hydrotreater System (PFD-14101), consisting of:

(1) One (1) SMR hydrogen unit, identified as R-101, generating hydrogen from natural gas and steam.

(2) One (1) natural gas-fueled SMR heater, identified as B-101, with a maximum heat input capacity of 9.00 MMBtu/hr, exhausting to stack SMR Heater.

(h) One (1) Hydrotreater Hydrogen Recycle System, identified as PFD-14201, constructed in 2020 and 2021, consisting of:

(1) One (1) recycle compressor suction K.O. drum, identified as V-14203, receiving hydrogen makeup from the hydrogen plant and hydrogen recycle flash gas from V-14202 in the hydrotreater system, discharging recycle gas to the recycle compressor and purge gas to E-13203 in the VMS and Hydrotreating Fuel Gas H_2S Removal System (PFD-13201).

(i) One (1) Fractionation System, identified as PFD-14301, constructed in 2020 and 2021, with a maximum capacity of 4,032 gallons of fuel liquids per hour and a bottlenecked capacity of 17,660,160 gallons of fuel liquids per year, consisting of:

(1) One (1) feed/naphtha exchanger, identified as E-14302, discharging stabilized naphtha to naphtha certified stream tanks (TK-15211 and TK-15212) in the tank farm.

(2) One (1) feed/diesel exchanger, identified as E-14303.

(3) One (1) diesel salt dryer, identified as V-14302, discharging to distillate certified stream tanks (TK-15311 and TK-15312) in the tank farm.

(4) One (1) fractionator charge heater, identified as H-14301, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 4.46 MMBtu/hr, using no control and exhausting combustion products to stack Fractionator Heater.

(5) One (1) fractionating column, identified as T-14301, discharging, a naphtha side stream to T-14302, a diesel side stream to T-14303, and heavy hydrocarbons to VMS Heavy Hydrocarbon Cooler E-13102.

(6) One (1) air-cooled tower overhead condenser, identified as E-14301.

(7) One (1) naphtha side stripper, identified as T-14302, discharging naphtha to E-14302.

(8) One diesel side stripper, identified as T-14303, discharging diesel to E-14303.

(9) One (1) tower accumulator, identified as V-14301, discharging vapor to E-14304, liquids to tower T-14301, and wastewater to wastewater treatment.

(10) One (1) process fuel gas cooler, identified as E-14304, discharging to V-14303.

(11) One (1) process fuel gas flash drum, identified as V-14303, discharging vapor to the process fuel gas header, and wastewater to wastewater treatment.

(j) One (1) Fulton Model ICX-30 boiler, identified as Fractionator Boiler, fueled by natural gas and/or process fuel gas, with a maximum heat input capacity of 0.85 MMBtu/hr, using no control and exhausting combustion products to stack Boiler-1.

(k) One (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 (PFD-15501), constructed in 2020, with maximum loading rate of 600 gallons per minute and a limited annual throughput of 17,660,160 gallons of naphtha, controlled by thermal oxidizer X-311.

Under 40 CFR 61, Subpart BB, loading rack LR1 is an affected source.

(l) One (1) loading rack thermal oxidizer, identified as X-311 (PFD-15401), constructed in 2020, using electronic ignition.

(m) One (1) process flare for emergency and startup or shutdown operations, identified as X-400 (PFD-16103), constructed in 2020, with four (4) natural gas fired pilot burners with a maximum total heat input capacity of 0.29 MMBtu/hr.

(n) Unpaved roads.

(o) One (1) Dewaxing System, identified as PFD-14401, constructed in 2020, with a maximum capacity of 7,141 pounds of VMS bottoms per hour, consisting of:

(1) One (1) steam heater, identified as E-14400, discharging to the mixer.

(2) One (1) mixer, identified as M-14400, discharging to scraped wall heat exchanger E-14402.

(3) One (1) scraped wall heat exchanger, identified as E-14402, discharging solvent/wax mixture to scraped wall heat exchanger E-14403 and oil/solvent mixture to the oil/solvent steam heater.

(4) One (1) scraped wall heat exchanger, identified as E-14403, discharging wax and solvent to the primary drum.

(5) One (1) primary drum, identified as V-14401, discharging a solvent/wax mixture to the main filter and an upset or emergency vent stream to flare X-400.

(6) One (1) cross exchanger, identified as E-14409, discharging oil/solvent mixture to the oil/solvent steam heater and oil to wax oil tank TK-15421.

(7) One (1) oil/solvent steam heater, identified as E-14410, discharging oil/solvent mixture to the oil column heater.

(8) One (1) hot oil-heated oil column heater, identified as E-14411, discharging to the oil/solvent distillation column.

(9) One (1) oil/solvent distillation column, identified as T-14401, discharging oil to cross exchanger E-14409 and solvent to the overhead condenser.

(10) One (1) water-cooled overhead condenser, identified as E-14412, discharging solvent to the oil column condensing drum

(11) One (1) oil column condensing drum, identified as D-14405, discharging condensed solvent to T-14401 reflux and the dry solvent/wet solvent drum and an upset or emergency vent stream to flare X-400.

(12) One (1) main filter, identified as F-14401, discharging filtered solvent to the solvent hold drum and a solvent/wax mixture to the secondary filter.

(13) One (1) secondary filter, identified as F-14402, discharging filtered solvent to the solvent hold drum and solvent/wax mixture to the scraped wax conveyor.

(14) One (1) steam-heated scraped wax conveyor, identified as CV-14403, discharging the wax tower F/E exchanger.

(15) One (1) wax tower F/E exchanger, identified as E-14404, discharging wax/solvent mixture to the wax steam heater and wax to tanks TK-15411 and TK-15412.

(16) One (1) wax steam heater, identified as E-14405, discharging to the wax tower heater.

(17) One (1) hot oil-heated wax tower heater, identified as E-14406, discharging to the wax/solvent distillation column,

(18) One (1) wax/solvent distillation column, identified as T-14402, discharging wax to wax tower F/E exchanger and solvent to the wax tower condenser.

(19) One (1) water-cooled wax tower condenser, identified as E-14407, discharging to the wax column condensing drum.

(20) One (1) wax column condensing drum, identified as D-14406, discharging condensed solvent to T-14402 reflux and the dry solvent/wet solvent drum and an upset or emergency vent stream to flare X-400.

(21) One (1) dry solvent/wet solvent drum, identified as D-14403, discharging dry solvent to the dry solvent chiller and wet solvent to the scraped wall heat exchangers.

(22) One (1) refrigerated dry solvent chiller, identified as E-14413, discharging chilled solvent to the main filter and secondary filter.

(23) One (1) solvent hold drum, identified as D-14402, discharging solvent to scraped wall heat exchanger E-14402 and vacuum pump exhaust to the atmosphere.

Insignificant Activities

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

(a) Emergency generators as follows:

(1) Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

Under 40 CFR 60, Subpart IIII, the emergency generators are affected sources.

Under 40 CFR 63, Subpart ZZZZ, the emergency generators are new affected sources.

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15211	IFR	Naphtha certified stream	127,200 (483)
15212	IFR	Naphtha certified stream	127,200 (483)

Notes:
1. IFR - internal floating roof

Under 40 CFR 60, Subpart Kb, the naphtha certified stream tanks (TK-15211 and TK-15212) are affected facilities.

The source also consists of the insignificant activities listed below which are not specifically regulated, as

defined in 326 IAC 2-7-1(21).

(a) Water based activities, including the following:

(1) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.
(2) One (1) forced draft cooling tower, with a maximum capacity of 82.8 gallons per hour.

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15101	IFR	Hydrotreater feed	265,000 (1,003)
15111	IFR	Fractionator feed	265,000 (1,003)
15121	FR	Wax extraction feed tank	127,200 (483)
15311	FR	Distillate certified stream	265,000 (1,003)
15312	FR	Distillate certified stream	265,000 (1,003)
15421	FR	Wax oil	56,500 (214)
15602	FR	Slop tank (others)	56,500 (214)

Notes:
1. FR - fixed (frangible) roof, IFR - internal floating roof

Emission Units and Pollution Control Equipment Constructed Under the Provisions of 326 IAC 2-1.1-3 (Exemptions)

As part of this permitting action, the source requested to add the following existing emission unit(s) constructed under the provisions of 326 IAC 2-1.1-3 (Exemptions):

(a) Emergency generators as follows:

(1) Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

These emergency generators replace a single 1490 hp diesel fueled emergency generator that was never installed.

These emission units are identified as exempt under 326 IAC 2-1.1-3(e)(25)(B)(ii) because they are Emergency Diesel generators not exceeding one thousand six hundred (1,600) horsepower. (hp).

The emission unit(s) is/are identified under 326 IAC 2-1.1-3(e)(2) - (46) (Exemptions) and the addition of the emission unit(s) did not require the source to transition to a higher operation permit level. Therefore, pursuant to 326 IAC 2-1.1-3(e), the permit revision requirements under 326 IAC 2-8-11.1, including the requirement to submit an application, do not apply to the emission unit(s). See Appendix A of this Technical Support Document for detailed emission calculations.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) One (1) LPG System, identified as PFD-15402, approved in 2016 for construction, with a maximum capacity of 767 pounds of LPG per hour, consisting of:

(1) One (1) LPG salt dryer, identified as V-15410, discharging to LPG storage vessel (V-15411).

(2) One (1) LPG storage vessel, identified as V-15411, discharging LPG to V-15412 or the LPG loadout operation.

(3) One (1) steam heated LPG evaporator, identified as V-15412, discharging to the process fuel gas header.

(4) One (1) LPG truck loadout operation.

The source has also removed the following insignificant activities:

(b) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

as follows:

(1) Above-ground storage tanks, constructed in 2020, consisting of:

ID	Construction[1]	Contents	Capacity (gallons) (m^3)
15011	FR	Heavy hydrocarbon certified stream	56,500 (214)
15012	FR	Heavy hydrocarbon certified stream	56,500 (214)
15131	IFR	Wax extraction solvent (MEK)	8,400 (32)
15132	IFR	Wax extraction solvent (toluene)	8,400 (32)
15411	FR	Wax certified	265,000 (1,003)
15412	FR	Wax certified	265,000 (1,003)
15601	FR	Slop tank (lights)	56,500 (214)

Notes:
1. FR - fixed (frangible) roof, IFR - internal floating roof

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

County Attainment Status

The source is located in Steuben County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.
$PM_{2.5}$	Unclassifiable or attainment effective April 15, 2015, for the 2012 annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO_2 standard.
Pb	Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Steuben County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Steuben 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
Steuben County has been classified as attainment or unclassifiable in Indiana for all the 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 (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The source is not a petroleum refinery because it is not in SIC code group 2911. The source is not a chemical process plant because it is not in SIC code major group 28 or NAICS 325.

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

	Unrestricted Potential Emissions (ton/year)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Total HAPs**
Total PTE of Entire Source Excluding Fugitive Emissions*	583.63	585.26	585.26	0.32	38.45	8,534	6,704	35.19	72.37
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	--	--

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

[3]Single highest source-wide HAP is benzene.

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM10, PM2.5, VOC, and CO are equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source's PM10, PM2.5, VOC, and CO emissions to less than Title V major source thresholds. Therefore, the source will be issued a FESOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of all other regulated air pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the source will be issued FESOP Renewal because the source will limit HAP emissions to less than the Title V major source threshold levels. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) subject to the provisions of 326 IAC 2-7.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this FESOP renewal, 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 Renewal (tons/year)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Total HAPs**
Total PTE of Entire Source Excluding Fugitive Emissions*	37.39	27.77	27.77	0.32	38.45	76.28	92.27	6.42	16.50
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)								
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP[3]**	**Total HAPs**
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

[3]Single highest source-wide HAP is benzene.

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) 40 CFR 60, Subpart Dc
The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc and 326 IAC 12, are not included in the permit, since the maximum design heat input capacity of each unit meeting the definition of steam generating unit in 40 CFR 60.41c is less than 2.9 MW (10 MMBtu/hr).

(b) 40 CFR 60, Subpart E
The requirements of the New Source Performance Standard for Incinerators, 40 CFR 60, Subpart E and 326 IAC 12, are not included in the permit, since the processors are not furnaces used in the process of burning solid waste for the purpose of reducing the volume of the waste by removing combustible matter as defined at 40 CFR 60.51.

(c) 40 CFR 60, Subpart Ea
The requirements of the New Source Performance Standard for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994, 40 CFR 60, Subpart Ea and 326 IAC 12, are not included in the permit, since the source commenced construction after September 20, 1994 and, pursuant to 40 CFR 60.50a(k), pyrolysis/combustion units that are an integrated part of a plastics/rubber recycling unit (as defined in §60.51a) are not subject to this subpart.

(d) 40 CFR 60, Subpart Eb
The requirements of the New Source Performance Standard for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996, 40 CFR 60, Subpart Eb and 326 IAC 12, are not included in the permit, since, pursuant to 40 CFR 60.50b(m), pyrolysis/combustion units that are an integrated part of a plastics/rubber recycling unit (as defined in §60.51b) are not subject to this subpart and each processor does not have the capacity to burn 250 tons of municipal solid waste per day.

(e) 40 CFR 60, Subpart Ja
The requirements of the New Source Performance Standard for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007, 40 CFR 60, Subpart Ja and 326 IAC 12, are not included in the permit, since the source is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.

(f) 40 CFR 60, Subpart Kb
This source is subject to the New Source Performance Standards for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60, Subpart Kb), because the tanks are storage vessels with a capacity greater than or equal to 75 cubic meters (m^3) that are used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(1) Tanks 15211 and 15212 are subject to 40 CFR 60, Subpart Kb and 326 IAC 12, because the units are storage vessels with a capacity greater than or equal to 75 cubic meters (m^3), each, that are used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification commenced after July 23, 1984.

The units subject to this rule include the following:

- One (1) internal floating roof tank, identified as 15211, constructed in 2020, with a maximum storage capacity of 265,000 gallons of naphtha.
- One (1) internal floating roof tank, identified as 15212, constructed in 2020, with a maximum storage capacity of 265,000 gallons of naphtha.

Applicable portions of the NSPS are the following:

(A) 40 CFR 60.110b(a)
(B) 40 CFR 60.111b
(C) 40 CFR 60.112b(a)(1)
(D) 40 CFR 60.113b(a)
(E) 40 CFR 60.114b
(F) 40 CFR 60.115b(a)
(G) 40 CFR 60.116b
(H) 40 CFR 60.117b

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the tanks 15211 and 15212 except as otherwise specified in 40 CFR 60, Subpart Kb.

(2) The requirements of 40 CFR 60, Subpart Kb are not included in this permit for the units listed in the table below, for reasons described in the table and notes

Tank ID	Capacity (m^3)	Maximum True Vapor Pressure[1] (kPa)	Reason not Subject
15101	1003	7.90E-04	pursuant to 40 CFR 40.110b(b)[2]
15111	1003	7.90E-04	
15311	1003	9.33E-02	
15312	1003	9.33E-02	

Tank ID	Capacity (m^3)	Maximum True Vapor Pressure[1] (kPa)	Reason not Subject
15602	214	9.33E-02	
15121	482	9.33E-02	
15421	214	9.33E-02	

Notes:

1. *Maximum true vapor pressure as defined at 40 CFR 60.111b.*
2. *Pursuant to 40 CFR 60.110b(b), the subpart does not apply to vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kPa.*
3. *Pursuant to 40 CFR 60.110(a), the subpart does not apply to tanks with capacity less than 75m^3 (19,815 gallons)*

(g) 40 CFR 60, Subpart VVa

The requirements of the New Source Performance Standard for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, 40 CFR 60, Subpart VVa (326 IAC 12), are not included in the permit, since the source does not produce, as an intermediate or final product, one or more of the chemicals listed in 40 CFR 60.489.

(h) 40 CFR 60, Subpart GGGa

The requirements of the New Source Performance Standard for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, 40 CFR 60, Subpart GGGa (326 IAC 12), are not included in the permit, since the source is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.

(i) 40 CFR 60, Subpart RRR

This source is subject to the New Source Performance Standards for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes (40 CFR 60, Subpart RRR), because the source produces one or more of the chemicals listed in 40 CFR 60.707 as a product, co-product, by-product, or intermediate.

The facilities subject to this rule include the following:

- Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, with a maximum capacity of 5,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

- Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, with a maximum capacity of 5,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

- Two (2) plastics-to-fuel processors, identified as R-52001 and R-72001, with a maximum capacity of 5,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no

control and exhausting combustion products to stacks Processor 5 and Processor 7, respectively.

- One (1) VMS and Hydrotreating Fuel Gas H_2S Removal System, identified as PFD-13201, constructed in 2020 and 2021, consisting of:
    - One (1) hydrolysis reactor, identified as V-13201.
    - Two (2) H_2S treaters operating in series, identified as V-13202A and V-13202B.
- One (1) Hydrotreater System, identified as PFD-14101, constructed in 2020 and 2021, with a maximum throughput of 2,016 gallons of fuel liquids per hour, consisting of:
    - One (1) diolefins reactor, identified as R-14101.
    - One (1) hydrotreater bed 1, identified as R-14102A.
    - One (1) hydrotreater bed 2, identified as R-14102B.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.700(a)
(2) 40 CFR 60.700(b)(3)
(3) 40 CFR 60.700(c)(2)
(4) 40 CFR 60.701
(5) 40 CFR 60.702(a)
(6) 40 CFR 60.703(c)
(7) 40 CFR 60.704(a)
(8) 40 CFR 60.704(b)
(9) 40 CFR 60.704(d)
(10) 40 CFR 60.704(e)
(11) 40 CFR 60.704(f)
(12) 40 CFR 60.705(a)
(13) 40 CFR 60.705(b)
(14) 40 CFR 60.705(c)
(15) 40 CFR 60.705(d)
(16) 40 CFR 60.705(k)
(17) 40 CFR 60.705(l)
(18) 40 CFR 60.705(m)
(19) 40 CFR 60.705(q)
(20) 40 CFR 60.705(s)
(21) 40 CFR 60.705(t)
(22) 40 CFR 60.706
(23) 40 CFR 60.707
(24) 40 CFR 60.708

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the six (6) plastics-to-fuel processors and the hydrotreating system reactor processes except as otherwise specified in 40 CFR 60, Subpart RRR.

(j) 40 CFR 60, Subpart AAAA
This source is subject to the New Source Performance Standards for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001 (40 CFR 60, Subpart AAAA), because the source has the capacity to combust at least 35 tons per day but no more than 250 tons per day of municipal solid waste or refuse-derived fuel.

The facilities subject to this rule include the following:

- Two (2) plastics-to-fuel processors, identified as R-12001 and R-22001, with a maximum capacity of 5,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 1 and Processor 2, respectively.

- Two (2) plastics-to-fuel processors, identified as R-32001 and R-42001, with a maximum capacity of 5,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 3 and Processor 4, respectively.

- Two (2) plastics-to-fuel processors, identified as R-52001 and R-72001, with a maximum capacity of 5,000 pounds of plastic per hour, each, using a vapor management system as control for process emissions. Each processor is heated by a burner combusting natural gas and/or process fuel gas, with a maximum heat input capacity of 6.00 MMBtu/hr, using no control and exhausting combustion products to stacks Processor 5 and Processor 6, respectively.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.1000
(2) 40 CFR 60.1005
(3) 40 CFR 60.1010
(4) 40 CFR 60.1015
(5) 40 CFR 60.1020(h)
(6) 40 CFR 60.1030
(7) 40 CFR 60.1465

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the six (6) plastics-to-fuel processors except as otherwise specified in 40 CFR 60, Subpart AAAA.

(k) 40 CFR 60, Subpart BBBB
The requirements of the Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999, 40 CFR 60, Subpart BBBB (326 IAC 12), are not included in the permit, since the requirements of the subpart are applicable to state air quality programs.

(l) 40 CFR 60, Subpart CCCC
The requirements of the New Source Performance Standard for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60, Subpart CCCC (326 IAC 12), are not included in the permit, since the source will not combust solid waste (as that term is defined by the Administrator in 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter.

(m) 40 CFR 60, Subpart DDDD
The requirements of the Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60, Subpart DDDD (326 IAC 12), are not included in the permit, since the requirements of the subpart are applicable to state air quality programs.

(n) 40 CFR 60, Subpart EEEE
The requirements of the New Source Performance Standard for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60, Subpart EEEE (326 IAC 12), are not included in the permit, since the source is not a very small municipal waste combustion units or institutional waste incineration units as defined in §60.2977.

(o) 40 CFR 60, Subpart FFFF
The requirements of the Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004, 40 CFR 60, Subpart FFFF (326 IAC 12), are not included in the permit, since the requirements of the subpart are applicable to state air quality programs.

(p) 40 CFR 60, Subpart IIII
This source is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII), because the emergency generators are stationary CI ICE that commenced construction after July 11, 2005, where the stationary CI ICE were manufactured after April 1, 2006, for engines that are not fire pump engines.

The facilities subject to this rule include the following:

- Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.4200(a)(2)(i)
(2) 40 CFR 60.4200(c)
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207(b)
(6) 40 CFR 60.4208(a)
(7) 40 CFR 60.4209
(8) 40 CFR 60.4211(a)
(9) 40 CFR 60.4211(c)
(10) 40 CFR 60.4211(f)(1), (2)(i), (3)
(11) 40 CFR 60.4211(g)
(12) 40 CFR 60.4214(b)
(13) 40 CFR 60.4214(d)
(14) 40 CFR 60.4218
(15) 40 CFR 60.4219
(16) Table 8 to Subpart IIII of Part 60

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the two (2) diesel fueled emergency generators except as otherwise specified in 40 CFR 60, Subpart IIII.

Based on this evaluation, this source is subject to 40 CFR 60, Subpart IIII. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 60.4211(f)(2)(ii) - (iii) of NSPS Subpart IIII. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA's Guidance Memo:

https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as ~~strikethrough~~ text. At this time, IDEM is not making any changes to the permit's attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 60.4211(f)(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph~~s~~ (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.~~

(q) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(r) 40 CFR 61, Subpart J
The requirements of the National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene, 40 CFR 61, Subpart J (326 IAC 14-7), are not included in the permit, because this source does not include any of the following sources that are intended to operate in benzene 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 Subpart J. *In benzene service* means that a piece of equipment either contains or contacts a fluid (Liquid or gas) that is at least 10 percent benzene by weight 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 benzene service.

(s) 40 CFR 61, Subpart V
The requirements of the National Emission Standard for Equipment Leaks (Fugitive Emission Sources), 40 CFR 61, Subpart V (326 IAC 14-8-1), are not included in the permit, because this source does not include any 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 Subpart V. *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.

(t) 40 CFR 61, Subpart BB
This source is subject to the National Emission Standard for Benzene Emissions From Benzene Transfer Operations (40 CFR 61, Subpart BB), because the source operates loading racks at which benzene is loaded into tank trucks.

The facilities subject to this rule include the following:

- One (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1 (PFD-15501), constructed in 2020, with maximum loading rate of 600 gallons per minute and a limited annual throughput of 17,660,160 gallons of naphtha, controlled by thermal oxidizer X-311.

Applicable portions of the NESHAP are the following:

(1) 40 CFR 61.300(a)
(2) 40 CFR 61.300(b)
(3) 40 CFR 61.301
(4) 40 CFR 61.305(i)
(5) 40 CFR 61.306

The requirements of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated as 326 IAC 14-1, apply to the loading racks except as otherwise specified in 40 CFR 61, Subpart BB.

(u) 40 CFR 61, Subpart FF
The requirements of the National Emission Standard for Benzene Waste Operations, 40 CFR 61, Subpart FF, are not included in the permit, because any gaseous stream from a waste management unit, treatment process, or wastewater treatment system routed to a fuel gas system, as defined in 40 CFR 61.341, is exempt from Subpart FF.

(v) 40 CFR 63, Subpart F
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry, 40 CFR 63, Subpart F (326 IAC 20-11), are not included in the permit, since the source is not a major source of HAP emissions.

(w) 40 CFR 63, Subpart G
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, 40 CFR 63, Subpart G (326 IAC 20-11), are not included in the permit, since the source is not a major source of HAP emissions.

(x) 40 CFR 63, Subpart Q
The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers, 40 CFR 63, Subpart Q (326 IAC 20-4), are not included in the permit, since the source is not a major source of HAP emissions.

(y) 40 CFR 63, Subpart R
The requirements of the National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations, 40 CFR 63, Subpart R (326 IAC 20-10), are

not included in the permit, since the source does not receive gasoline by pipeline and is not a major source of HAP emissions.

(z) 40 CFR 63, Subpart CC
The requirements of the National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, 40 CFR 63, Subpart CC (326 IAC 20-16), are not included in the permit, since the source is not primarily engaged in petroleum refining as defined in the Standard Industrial Classification code for petroleum refining (2911) and is not a major source of HAP emissions.

(aa) 40 CFR 63, Subpart DD
The requirements of the National Emission Standard for Off-Site Waste and Recovery Operations, 40 CFR 63, Subpart DD (326 IAC 20-23), are not included in the permit, because the source is not a major source of HAP emissions and because the source is not 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 or a waste management operation that treats wastewater which is an off-site material.

(bb) 40 CFR 63, Subpart SS
The requirements of the National Emission Standard for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, 40 CFR 63, Subpart SS (326 IAC 20-39), are not included in the permit, because the source is not subject to another subpart that references the use of Subpart SS.

(cc) 40 CFR 63, Subpart EEE
The requirements of the National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors, 40 CFR 63, Subpart EEE (326 IAC 20-28), are not included in the permit, because the source will not combust hazardous waste as defined at 40 CFR 261.3.

(dd) 40 CFR 63, Subpart UUU
The requirements of the National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units, 40 CFR 63, Subpart UUU (326 IAC 20-50), are not included in the permit, since the source is not primarily engaged in petroleum refining as defined in the Standard Industrial Classification code for petroleum refining (2911) and is not a major source of HAP emissions.

(ee) 40 CFR 63, Subpart EEEE
The requirements of the National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline), 40 CFR 63, Subpart EEEE (326 IAC 20-83), are not included in the permit, since the source is not a major source of HAP emissions.

(ff) 40 CFR 63, Subpart FFFF
The requirements of the National Emission Standards for Hazardous Pollutants: Miscellaneous Organic Chemical Manufacturing, 40 CFR 63, Subpart FFFF (326 IAC 20-84), are not included in the permit, since the source is not a major source of HAP emissions.

(gg) 40 CFR 63, Subpart ZZZZ
This source is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ (326 IAC 20-82), because the emergency generators are stationary reciprocating internal combustion engines (RICE) located at an area source of HAP emissions that commenced construction on or after June 12, 2006.

The facilities subject to this rule include the following:

- Two (2) diesel fueled emergency generators, each with a rated engine output of 670 horsepower (hp), running in parallel for a total engine output of 1340 hp.

Applicable portions of the NESHAP are the following:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665)
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the emergency generators except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

Based on this evaluation, this source is subject to 40 CFR 63,Subpart ZZZZ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 63.6640(f)(2)(ii) - (iii) of NESHAP Subpart ZZZZ. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA's Guidance Memo:
https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as ~~strikethrough~~ text. At this time, IDEM is not making any changes to the permit's attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 63.6640(f)(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraph~~s~~ (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.~~

(hh) 40 CFR 63, Subpart DDDDD
The requirements of the National Emission Standards for Hazardous Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (326 IAC 20-95), are not included in the permit, since the source is not a major source of HAP emissions.

(ii) 40 CFR 63, Subpart BBBBBB
The requirements of the National Emission Standards for Hazardous Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40 CFR 63, Subpart BBBBBB, are not included in the permit, since the source is not a bulk gasoline terminal, pipeline breakout station, pipeline pumping station, or bulk gasoline plant as the terms are defined at 40 CFR 63.11100. The source does not receive gasoline by pipeline, ship or barge, or cargo tank.

(jj) 40 CFR 63, Subpart CCCCCC
The requirements of the National Emission Standards for Hazardous Pollutants for Source Category: Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCCC, are not included in the permit, since the source is not a gasoline dispensing facility as defined at 40 CFR 63.11132. The source does not dispense gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine.

(kk) 40 CFR 63, Subpart JJJJJJ
The requirements of the National Emission Standards for Hazardous Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ, are not included in the permit. The two (2) fluidized bed dryers, two (2) extruder hot oil heaters, four (4) processors, one (1) hydrotreater heater, and one (1) fractionation heater are not boilers as defined at 40 CFR 63.11237, because these units do not generate steam or hot water. Pursuant to 40 CFR.11195(e), the fractionator boiler is not subject to this subpart because the unit is a gas-fired boiler.

(ll) 40 CFR 63, Subpart VVVVVV
The requirements of the National Emission Standards for Hazardous Pollutants for Chemical Manufacturing Area Sources, 40 CFR 63, Subpart VVVVVV, are not included in the permit, since the source does not operate a chemical process manufacturing unit that meets the conditions specified in 40 CFR 63.11494(a)(1) and (2). The source does not use as a feedstock, generate as a byproduct, or produce HAPs listed in Table 1 to Subpart VVVVVV at a concentration greater than 0.1 percent by weight.

(mm) 40 CFR 63, Subpart BBBBBBB
The requirements of the National Emission Standards for Hazardous Pollutants for Area Sources: Chemical Preparations Industry, 40 CFR 63, Subpart BBBBBBB, are not included in the permit, since the source does not operate any chemical preparations operation in target HAP service as defined at 40 CFR 63.11588. Equipment at the source does not contain, contact, or process metal compounds of chromium, lead, manganese, and nickel.

(nn) 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.

Compliance Assurance Monitoring (CAM)

(oo) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability - Entire Source

State rule applicability for this source has been reviewed as follows:

326 IAC 2-2 (PSD)
PSD applicability is discussed under the Potential to Emit After Issuance section of this document.

PSD Minor Source Limits

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

(a) The PM_{10} and $PM_{2.5}$ emissions from the following processes shall not exceed the emission limits in the table below:

Process ID	Process Description	Control ID	PM_{10} Emissions Limits (lbs/hr)	$PM_{2.5}$ Emissions Limits (lbs/hr)
FPS 1	Pre-shred	Baghouse DC-1	1.29	1.29
FPS 1	Re-shred			
FPS 2	Pre-shred			
FPS 2	Re-shred			

(b) The PM emissions from the following processes shall not exceed the emission limits in the table below:

Process ID	Process Description	Control ID	PM Emissions Limits (lbs/hr)
FPS 1	Pre-shred	Baghouse DC-1	3.86
FPS 1	Re-shred		
FPS 2	Pre-shred		
FPS 2	Re-shred		

(c) The VOC emissions from combustion of process fuel gas shall be less than 71.24 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The CO emissions from the following units shall not exceed the values in the table below, when the emission units are combusting process fuel gas:

Emission Unit ID	CO Limit (lb/hr)
FPS 1 Dryer	1.72
FPS 2 Dryer	1.72
FPS 1 Hot Oil Heater	2.30
FPS 2 Hot Oil Heater	2.30
R-12001 (Processor 1)	2.30
R-22001 (Processor 2)	2.30
R-32001 (Processor 3)	2.30
R-42001 (Processor 4)	2.30
R-52001 (Processor 5)	2.30
R-72001 (Processor 7)	2.30
H-14101 (Hydrotreater heater)	0.54

Emission Unit ID	CO Limit (lb/hr)
H-14301 (Fractionator heater)	1.71
Fractionator Boiler	0.32

(1) No more than two (2) processors shall be in operation in Plastics Conversion Line 1 at any time.

(2) No more than two (2) processors shall be in operation in Plastics Conversion Line 2 at any time.

(e) The VOC emissions from the thermal oxidizer, identified as X-311, shall not exceed 0.231 pounds per 1,000 gallons (lb/kgal) of naphtha loaded out.

(f) The one (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 shall be limited to a throughput of 17,660,160 gallons of naphtha per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM, PM10, PM2.5, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM10, PM2.5, VOC, and CO to less than 250 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

The unlimited potential to emit of HAPs from the new units is greater than ten (10) tons per year for any single HAP and/or greater than twenty-five (25) tons per year of a combination of HAPs. However, the source shall limit the potential to emit HAPs from the new units to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the proposed revision is not subject to the requirements of 326 IAC 2-4.1. See 326 IAC 2-8-4 (FESOP) Section below.

326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, Clark, or Floyd County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 2-8-4 (FESOP) and 326 IAC 20 (Hazardous Air Pollutants)
FESOP applicability is discussed under the Potential to Emit After Issuance section of this document.

FESOP PM10, PM2.5, VOC, and CO Limit(s)

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits), not applicable, the Permittee shall comply with the following:

(a) The PM_{10} and $PM_{2.5}$ emissions from the following processes shall not exceed the emission limits in the table below:

Process ID	Process Description	Control ID	PM_{10} Emissions Limits (lbs/hr)	$PM_{2.5}$ Emissions Limits (lbs/hr)
FPS 1	Pre-shred	Baghouse DC-1	1.29	1.29
FPS 1	Re-shred			
FPS 2	Pre-shred			
FPS 2	Re-shred			

(b) The VOC emissions from combustion of process fuel gas shall be less than 71.24 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) The CO emissions from the following units shall not exceed the values in the table below, when the emission units are combusting process fuel gas:

Emission Unit ID	CO Limit (lb/hr)
FPS 1 Dryer	1.72
FPS 2 Dryer	1.72
FPS 1 Hot Oil Heater	2.30
FPS 2 Hot Oil Heater	2.30
R-12001 (Processor 1)	2.30
R-22001 (Processor 2)	2.30
R-32001 (Processor 3)	2.30
R-42001 (Processor 4)	2.30
R-52001 (Processor 5)	2.30
R-72001 (Processor 7)	2.30
H-14101 (Hydrotreater heater)	0.54
H-14301 (Fractionator heater)	1.71
Fractionator Boiler	0.32

(1) No more than two (2) processors shall be in operation in Plastics Conversion Line 1 at any time.

(2) No more than two (2) processors shall be in operation in Plastics Conversion Line 2 at any time.

(d) The VOC emissions from the thermal oxidizer, identified as X-311, shall not exceed 0.231 pounds per 1,000 gallons (lb/kgal) of naphtha loaded out.

(e) The one (1) two-place loading rack for naphtha, diesel, and wax, identified as LR1 shall be limited to a throughput of 17,660,160 gallons of naphtha per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, VOC, and CO to less than 100 tons per twelve (12) consecutive month period, each and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

FESOP HAP Limit(s)

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), and render the requirements of 326 IAC

2-7 (Part 70 Permits) not applicable, the Permittee shall comply with the following:

(a) When combusting process fuel gas the HAP emissions from the following units shall not exceed the emission limits in the table below:

Emission Unit ID	Benzene Limit (lb/hr)	Toluene Limit (lb/hr)
FPS 1 Dryer	0.12	8.10E-02
FPS 2 Dryer	0.12	8.10E-02
FPS 1 Hot Oil Heater	0.17	0.11
FPS 2 Hot Oil Heater	0.17	0.11
R-12001 (Processor 1)	0.17	0.11
R-22001 (Processor 2)	0.17	0.11
R-32001 (Processor 3)	0.17	0.11
R-42001 (Processor 4)	0.17	0.11
R-52001 (Processor 5)	0.17	0.11
R-72001 (Processor 7)	0.17	0.11
H-14101 (Hydrotreater heater)	3.90E-02	2.60E-02
H-14301 (Fractionator heater)	0.12	0.08
Fractionator Boiler	2.30E-02	1.50E-02

(1) No more than two (2) processors shall be in operation in Plastics Conversion Line 1 at any time.

(2) No more than two (2) processors shall be in operation in Plastics Conversion Line 2 at any time.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit total HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA) and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the unpaved roads have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Steuben County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Steuben County) is not subject to the requirements

of 326 IAC 6.8 because it is not located in Lake County.

State Rule Applicability – Individual Facilities

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE[1] based on AP-42 (lb/MMBtu)
FPS1 Hot Oil Heater	2020	6.00	63.74	0.37	0.37	0.002
FPS 2 Hot Oil Heater	2020	6.00	63.74	0.37	0.37	0.002
Processor 1 (R-12001)	2020	6.00	63.74	0.37	0.37	0.002
Processor 2 (R-22001)	2020	6.00	63.74	0.37	0.37	0.002
Processor 3 (R-32001)	2020	6.00	63.74	0.37	0.37	0.002
Processor 4 (R-42001)	2020	6.00	63.74	0.37	0.37	0.002
Hydrotreater heater (H-14101)	2020	1.43	63.74	0.37	0.37	0.002
Fractionator heater (H-14301)	2020	4.46	63.74	0.37	0.37	0.002
Fractionator boiler	2020	0.85	63.74	0.37	0.37	0.002
SMR Heater[2]	2020	9.00	63.74	0.37	0.37	0.002
Processor 5 (R-52001)	2020	6.00	63.74	0.37	0.37	0.002
Processor 7 (R-72001)	2020	6.00	63.74	0.37	0.37	0.002

Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

Notes:
1. *PM PTE based on AP-42 emission factor of 1.9 lb/MMCF divided by process fuel gas HHV of 825 MMBtu/MMCF, except as noted in (2).*
2. *PM PTE for natural gas-only combustion is AP-42 emission factor of 1.9 lb/MMCF divided by natural gas gas HHV of 1,020 MMBtu/MMCF*

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the shredding processes and dryers, since they are manufacturing processes not exempted from this rule under 326 IAC 6-3-1(b) and are not subject to particulate matter limitations that are as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c).

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the shredding process, dryers, conveyor process, extruder feed conveyors, and extruders shall not exceed limits specified when operating at the process weight rates specified in the table below. The pound per hour limitations were calculated with the following equation:

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

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

Summary of Process Weight Rate Limits				
Process / Emission Unit	**P (ton/hr)**	**E (lb/hr)**	**Uncontrolled PM Emissions[3] (lb/hr)**	**Control Needed for Compliance?**
Each shredding process[1]	6.615	14.53	128.57	Yes
Each dryer[2]	6.615	14.53	1.46	No

Notes:
1. *The shredding processes include Pre-shred and Re-shred in each of the two (2) FPS lines, a total of four (4) shredders, all controlled by a single baghouse, DC-1.*
2. *The dryers include FPS1-Dryer and FPS2-Dryer. These are controlled by material recovery cyclones; however, operation of the cyclones is not required to meet 326 IAC 6-3-2 emission limits.*
3. *See Appendix A of this Technical Support Document for detailed emission calculations.*

Baghouse DC-1 shall be in operation at all times the shredding process (including any of the FPS1 and FPS2 Pre-shred and Re-shred facilities) is in operation, in order to comply with the 14.53 lb/hr limit.

Based on calculations presented in Appendix A of this Technical Support Document, no control equipment is needed to comply with the 6-3-2 limits for the dryers, conveyor process, extruder feed conveyors or extruders.

(b) Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from the requirements of 326 IAC 6-3-2. Therefore the seven (7) conveyor processes, four (4) extruder feed conveyors, and six (6) extruders, each of which has potential emissions less than 0.551 pounds per hour, are not subject to the requirements of 326 IAC 6-3-2.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

None of the emission units at this source are subject to 326 IAC 326 IAC 7-1.1 because the source-wide potential to emit sulfur dioxide (SO2) is less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The facilities listed below are subject to the requirements of 326 IAC 8-1-6, because they were constructed after January 1, 1980, and their unlimited VOC potential emissions are equal to or greater than twenty-five (25) tons per year, and the facilities are not regulated by other rules in 326 IAC 8. Therefore, a Best Available Control Technology (BACT) analysis was required for these facilities (see Appendix B of the TSD for FESOP Permit 151-36464-00067 issued on August 3, 2016 and Appendix B of

the TSD for FESOP Significant Permit Revision 151-39409-00067 issued on June 6, 2018).

According to the BACT analyses contained in Appendix B of the TSD for FESOP Permit 151-36464-00067 and in Appendix B of FESOP Significant Permit Revision 151-39409-00067, IDEM, OAQ has determined that the following requirements represent BACT for the facilities:

(a) Pursuant to 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following:

(1) The emissions (process fuel gas) from the VMS fuel gas H_2S removal system shall be combusted in the following:

(A) FPS 1 dryer
(B) FPS 2 dryer
(C) FPS 1 Hot Oil Heater
(D) FPS 2 Hot Oil Heater.
(E) Processors 1, 2, 3, 4, 5, & 7 (R-12001, R-22001, R-32001, R-42001, R-52001, & R-72001)
(F) Hydrotreater heater (H-14101)
(G) Fractionator heater (H-14301)
(H) Fractionator Boiler
(I) Process Flare X-400 (PFD-16103)

(2) The control efficiency from the combustion of the process fuel gas shall not be less than 98% for each emissions unit.

(3) The VOC emissions from the combustion of process fuel gas shall not exceed 606 pounds of VOC per million standard cubic feet (lb/MMCF) of process fuel gas combusted.

(b) Pursuant to 326 IAC 8-1-6(3)(A), the loading racks are not subject to 326 IAC 8-1-6 because the units are regulated by other provisions of 326 IAC 8. The loading racks are subject to 326 IAC 8-4-9.

(c) Pursuant to 326 IAC 8-1-6(1), all other facilities at the source are not subject to 326 IAC 8-1-6 because the facilities have potential emissions of less than twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) of VOC per year, each.

326 IAC 8-4 (Petroleum Sources)
Pursuant to 326 IAC 8-4-1(c), sections 2 through 5 and 7 through 9 of this rule apply to all new sources of the types described in this rule as of January 1, 1980.

(a) 326 IAC 8-4-2 (Petroleum Refineries) is not applicable to the source because the source is not a petroleum refinery.

(b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
Pursuant to 326 IAC 8-4-3(a) the two (2) internal floating roof naphtha certified stream tanks, identified as Tank TK-15211 and TK-15212 are subject to 326 IAC 8-4-3(d) because they are petroleum liquid storage vessels with capacities greater than 39,000 gallons containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa. Pursuant to 326 IAC 8-4-3(d), the Permittee shall maintain records including the following:

(1) the types of volatile petroleum liquids stored;
(2) the maximum true vapor pressure; and
(3) records of the inspections performed on the storage vessels.

(c) 326 IAC 8-4-4 (Bulk Gasoline Terminals)
326 IAC 8-4-4 is not applicable to the source because the source is not a bulk gasoline terminal, as defined at 326 IAC 1-2-8. The source is not a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, barge or rail.

(d) 326 IAC 8-4-5 (Bulk Gasoline Plants)
326 IAC 8-4-5 is not applicable to the source because the source is not a bulk gasoline plant, as defined at 326 IAC 1-2-7. The source is not a gasoline storage and distribution facility which receives gasoline from bulk terminals by transport.

(e) 326 IAC 8-4-6 (Gasoline Dispensing Facilities)
Pursuant to 326 IAC 8-4-1(b), 326 IAC 8-4-6 is not applicable to the source because the source is not located in Clark, Elkhart, Floyd, Hendricks, Lake, Marion, Porter, or St. Joseph County.

(f) 326 IAC 8-4-7 (Gasoline Transports)
326 IAC 8-4-7 is not applicable to the source because the source is not an owner or operator of gasoline transports or the owner of a bulk gasoline terminal. The source is not a gasoline storage facility that receives gasoline from refineries primarily by pipeline, ship, barge or rail.

(g) 326 IAC 8-4-8 (Leaks from Petroleum Refineries)
326 IAC 8-4-8 is not applicable to the source because the source is not a petroleum refinery subject to 326 IAC 8-4.

(h) 326 IAC 8-4-9 (Leaks from Transports and Vapor Collection Systems)
326 IAC 8-4-9 applies to the source because naphtha produced by the source meets the definition of gasoline in 326 IAC 1-2-32 and transports for the product are therefore subject to 326 IAC 8-4-7.

(1) Pursuant to 326 IAC 8-4-9(b), the Permittee shall not allow a gasoline transport that is subject to this rule and that has a capacity of two thousand (2,000) gallons or more to be filled or emptied unless the gasoline transport completes the following:

(A) Annual leak detection testing before the end of the twelfth calendar month following the previous year's test, according to test procedures contained in 40 CFR 63.425(e), as follows:

(i) Conduct the pressure and vacuum tests for the transport's cargo tank using a time period of five (5) minutes. The initial pressure for the pressure test shall be four hundred sixty (460) millimeters H_2O (eighteen (18) inches H_2O) gauge. The initial vacuum for the vacuum test shall be one hundred fifty (150) millimeters H_2O (six (6) inches H_2O) gauge. The maximum allowable pressure or vacuum change is twenty-five (25) millimeters H_2O (one (1) inch H_2O) in five (5) minutes.

(ii) Conduct the pressure test of the cargo tank's internal vapor valve as follows:

(a) After completing the test under clause (A), use the procedures in 40 CFR 60, Appendix A, Method 27 to repressurize the tank to four hundred sixty (460) millimeters H_2O (eighteen (18) inches H_2O) gauge. Close the transport's internal vapor valve or valves, thereby isolating the vapor return line and manifold from the tank.

(*b*) Relieve the pressure in the vapor return line to atmospheric pressure, then reseal the line. After five (5) minutes, record the gauge pressure in the vapor return line and manifold. The

maximum allowable five (5) minute pressure increase is one hundred thirty (130) millimeters H_2O (five (5) inches H_2O).

(B) Repairs by the gasoline transport owner or operator, if the transport does not meet the criteria of subdivision (i), and retesting to prove compliance with the criteria of subdivision (i).

(2) Pursuant to 326 IAC 8-4-9(d), the Permittee shall:

(A) Design and operate the vapor balance system or vapor control system and the gasoline loading equipment in a manner that prevents:

(i) Gauge pressure from exceeding four thousand five hundred (4,500) pascals (eighteen (18) inches of H_2O) and a vacuum from exceeding one thousand five hundred (1,500) pascals (six (6) inches of H_2O) in the gasoline truck;
(ii) A reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL, measured as propane) at two and five-tenths (2.5) centimeters from all points on the perimeter of a potential leak source when measured by a method approved by the commissioner during loading or unloading operations at gasoline bulk terminals; and
(iii) Avoidable visible liquid leaks during loading or unloading operations at gasoline bulk terminals; and

(B) Within fifteen (15) days, repair and retest a vapor collection or control system that exceeds the limits in subdivision (i).

(3) Pursuant to 326 IAC 8-4-9(f), the Permittee shall maintain records of all certification testing. The records shall identify the following:

(A) The vapor balance, vapor collection, or vapor control system.

(B) The date of the test and, if applicable, retest.

(C) The results of the test and, if applicable, retest.

The records shall be maintained in a legible, readily available condition for at least two (2) years after the date the testing and, if applicable, retesting were completed.

326 IAC 8-6 (Organic Solvent Emission Limitations)
Pursuant to 326 IAC 8-6-1, 326 IAC 8-6 is not applicable to the source because the source is not an existing source (as of January 1, 1980), located in Lake or Marion Counties or a source commencing operation after October 7, 1974, and prior to January 1, 1980, located anywhere in the state.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
Pursuant to 326 IAC 8-9-1(a), storage tanks at the source are not subject to 326 IAC 8-9 because the source is not located in Clark, Floyd, Lake, or Porter County.

326 IAC 8-18 (Synthetic Organic Chemical Manufacturing Industry Air Oxidation, Distillation, and Reactor Processes)
Pursuant to 326 IAC 8-18-1(a), process units at the source are not subject to 326 IAC 8-18 because the source is not located in Lake, or Porter County.

326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

326 IAC 14 (Emission Standards for Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to assure 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 2-8-4. 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.

(a) The compliance determination requirements applicable to this source are as follows:

Compliance Determination Requirements:

(1) Baghouse DC-1 for particulate control shall be in operation and control emissions from the FPS Pre-shred and Re-shred facilities at all times the FPS Pre-shred and Re-shred facilities are in operation.

(2) One or more of the units listed below for VOC control shall be in operation and control emissions from the Vapor Management System facility at all times the Vapor Management System facility is in operation.

Process ID	Process Description	Control ID
PCU 1, PCU 2, PCU 3, PCU 4, PCU 5, and/or PCU 7	Plastics conversion system	FPS 1 Dryer
		FPS 2 Dryer
		FPS 1 Hot Oil Heater
		FPS 2 Hot Oil Heater
		R-12001 (Processor 1)
		R-22001 (Processor 2)
		R-32001 (Processor 3)
		R-42001 (Processor 4)
		R-52001 (Processor 5)
		R-72001 (Processor 7)
		H-14101 (Hydrotreater heater)
		Fractionator Heater
		Fractionator Boiler
		Process Flare X-400 (PFD-16103)

(3) The Permittee shall determine VOC emissions from combustion of process fuel gas according to the following formula:

$$E_V = \frac{Q \times 606 \frac{\text{lb VOC}}{\text{MMCF}}}{2{,}000 \frac{\text{lb}}{\text{ton}}}$$

Where E_V = Monthly VOC emissions, tons/month
Q = Monthly process fuel gas usage, MMCF/month

(4) The thermal oxidizer, identified as X-311, for VOC control shall be in operation and control emissions from the one (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1, at all times the one (1) two-place loading rack for naphtha, diesel, and heavy fuel oil, identified as LR1, is in operation.

Testing Requirements:

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Initial Testing**[1]	**Pollutant**	**Frequency of Testing**	**Authority**
FPS 1 & 2	DC-1	180 days	PM/PM10/PM2.5	Once every 5 years	326 IAC 2-8
VMS	FPS 1 Dryer	180 days	VOC, CO	Once every 5 years	326 IAC 2-8
	FPS 2 Dryer				
	FPS 1 Hot Oil Heater				
	FPS 2 Hot Oil Heater				
	R-12001 (PCU 1)				
	R-22001 (PCU 2)				
	R-32001 (PCU 3)				
	R-42001 (PCU 4)				
	R-52001 (PCU 5)				
	R-72001 (PCU 7)				
	H-14101 (HT Heater)				

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Initial Testing**[1]	**Pollutant**	**Frequency of Testing**	**Authority**
	Frac Heater Frac Boiler				
LR1	TO X-311	180 days	VOC	Once every 5 years	326 IAC 2-8

Notes:
1. 180 days is no later than 180 days after startup of each emission unit..

IDEM, OAQ is not requiring HAPs testing for units combusting process fuel gas or for the loading rack thermal oxidizer (X-311). The emissions limits for these units can be maintained by a HAPs control efficiency of 85%. Operation of these units in compliance with the VOC control requirements in conjunction with the preventive maintenance plan is sufficient to assure that the required HAP control efficiency is achieved at all times.

(b) The compliance monitoring requirements applicable to this source are as follows:

Emission Unit/Control	Operating Parameters	Frequency
Baghouse DC-1	Visible emissions	Once per day
FPS 1 Dryer	Temperature	Continuous
FPS 2 Dryer	Temperature	Continuous
FPS 1 Hot Oil Heater	Temperature	Continuous
FPS 2 Hot Oil Heater	Temperature	Continuous
R-12001 (Processor 1)	Temperature	Continuous
R-22001 (Processor 2)	Temperature	Continuous
R-32001 (Processor 3)	Temperature	Continuous
R-42001 (Processor 4)	Temperature	Continuous
R-52001 (Processor 5)	Temperature	Continuous
R-72001 (Processor 7)	Temperature	Continuous
H-14101 (Hydrotreater heater)	Temperature	Continuous
Fractionator Heater	Temperature	Continuous
Fractionator Boiler	Temperature	Continuous
Thermal oxidizer X-311	Presence of flame	Continuous when loading racks are operating

Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes were made to conditions contained previously issued permits/approvals (these changes may include Title I changes):

(1) Construction dates for equipment have been updated throughout the permit.

(2) Extruders no are no longer described as exhausting to stacks. They have fugitive emissions that exhaust to the atmosphere.

(3) Processors are now identified as PCU, rather than PCS, and processors 1, 2, and 5 (associated with FPS 1) are identified as North: processors; whereas processors 3, 4, and 7 (associated with FPS 2) are identified as "South" processors.

(4) In order to make permit nomenclature coincide with nomenclature used by plant personnel, FPS1 Extruder 3 has been redesignated FPS1 Extruder 5, FPS1 Processor 3 (R-32001) has been redesignated FPS1 Processor 5 (R-52001), FPS2 Extruder 6 has been redesignated FPS2 Extruder 7, and FPS2 Processor 6 (R-62001) has been redesignated FPS2 Processor 7 (R-72001).

(6) The LPG System, identified as PFD-15402, and all of its components have been removed throughout the permit.

(7) In addition to tanks 15411 and 15412 (removed as a part of the LPG System), The following tanks have also been removed: 15011, 15012, 15131, 15132, and 15601.

(8) A single never-installed 1490 hp emergency diesel fueled generator has been replaced by two 670 hp emergency diesel fueled generators, running in parallel for a total engine output of 1340 hp.

(9) The emission unit description for Section D.3 has been modified to include tanks 15211 and 15212.

(10) Section D.3.3 has been modified to include record keeping requirements for certification testing of the vapor balance/vapor control/vapor collection system and for liquids stored in-, vapor pressure, and inspections for tanks 15211 and 15212.

(11) Section D.3.8 has been modified to include record keeping requirements for tanks 15211 and 15212.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on October 30, 2020. Additional information was received on November 2, 2021; February 28, 2021; April 26, 2021; April 27, 2021; April 30, 2021; May 5, 2021; May 13, 2021; and May 15, 2021.

The operation of this stationary plastics to fuel processing plant shall be subject to the conditions of the attached proposed FESOP Renewal No. 151-43439-00067.

The staff recommends to the Commissioner that the FESOP Renewal be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Wyman Clark, 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) 232-0029 or (800) 451-6027, and ask for Wyman Clark or (317) 232-0029.

(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 Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

Appendix A: Emission Calculations
PTE Summary

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Uncontrolled Potential to Emit (tons/yr)							
Emission Unit	**PM**	**PM10**	**PM2.5**[1]	**SO_2**	**NOx**	**VOC**	**CO**
Material handling	1.48	1.48	1.48	-	-	-	-
Shredding and re-shredding	563.14	563.14	563.14	-	-	-	-
Drying	12.75	12.75	12.75				
Extruder process	5.04	5.04	5.04	-	-	-	-
Process heat sources[2]	0.50	2.01	2.01	0.16	26.42	8326.63	6698.55
SMR Heater	7.34E-02	0.29	0.29	2.32E-02	3.86	0.21	3.25
Storage tanks	-	-	-	-	-	2.55	-
Loading racks	-	-	-	-	-	203.95	-
Cooling tower	0.41	0.41	0.41	-	-	-	-
Flare pilot combustion	2.33E-03	9.32E-03	9.32E-03	7.36E-04	0.12	6.75E-03	0.10
Emergency generator	0.23	0.13	0.13	0.14	8.04	0.24	1.84
Total	**583.63**	**585.26**	**585.26**	**0.32**	**38.45**	**8,534**	**6,704**
Fugitive Emissions							
Equipment leaks	-	-	-	-	-	0.63	-
Unpaved roads	2.85	0.73	7.26E-02	-	-	-	-

Notes:
1. PM2.5 listed is direct PM2.5
2. Bottlenecked PTE, Processors operating at maximum capacity of FPS

Potential to Emit after Issuance[2] (tons/yr)							
Emission Unit	**PM**	**PM10**	**PM2.5**[1]	**SO_2**	**NOx**	**VOC**	**CO**
Conveying	1.48	1.48	1.48	-	-	-	-
Shredding and re-shredding	16.91	5.65	5.65	-	-	-	-
Drying	12.75	12.75	12.75				
Extruder process	5.04	5.04	5.04	-	-	-	-
Process heat sources	0.50	2.01	2.01	0.16	26.42	71.24	87.08
SMR Heater	7.34E-02	0.29	0.29	2.32E-02	3.86	0.21	3.25
Storage tanks	-	-	-	-	-	2.55	-
Loading racks	-	-	-	-	-	2.04	-
Cooling tower	0.41	0.41	0.41	-	-	-	-
Flare pilot combustion	2.33E-03	9.32E-03	9.32E-03	7.36E-04	0.12	6.75E-03	0.10
Emergency generator	0.23	0.13	0.13	0.14	8.04	0.24	1.84
Total	**37.39**	**27.77**	**27.77**	**0.32**	**38.45**	**76.28**	**92.27**
Fugitive Emissions							
Equipment leaks	-	-	-	-	-	0.63	-
Unpaved roads	2.85	0.73	7.26E-02	-	-	-	-

Notes:
1. PM2.5 listed is direct PM2.5
2. The shaded cells indicate where limits are included.

Appendix A: Emissions Calculations
Hazardous Air Pollutant Summary

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Uncontrolled Potential to Emit (tons/yr)								
Emission Unit	**Process Heat Sources**	**SMR Heater**	**Storage Tanks**	**Loading Racks**	**Flare Pilot**	**Emergency Generator**	**Fugitives**	**Total HAP**
Organic HAPs								
Acetaldehyde						5.91E-05		5.91E-05
Acrolein						1.85E-05		1.85E-05
Benzene	33.31	8.12E-05	2.29E-02	1.84	2.58E-06	1.82E-03	1.39E-02	35.19
1,3-Butadiene	0.39						7.28E-04	0.39
Cumene	1.93E-02		2.55E-03	0.20			3.64E-05	0.23
Dichlorobenzene	2.67E-04	4.64E-05			1.47E-06			3.14E-04
Ethylbenzene	1.11		2.55E-03	0.20			2.09E-03	1.32
Formaldehyde	1.67E-02	2.90E-03			9.20E-05	1.85E-04		1.98E-02
n-Hexane	0.40	6.96E-02	4.08E-02	3.26	2.21E-03		2.55E-04	3.78
Napthalene			1.27E-02	1.02				1.03
Total PAH[1]						4.97E-04		4.97E-04
Toluene	21.98	1.31E-04	3.31E-02	2.65	4.17E-06	6.59E-04	9.14E-03	24.67
2,2,4-Trimethylpentane			2.04E-02	1.63				1.65
Xylenes	3.06		1.27E-02	1.02		4.53E-04	1.27E-03	4.10
Inorganic HAPs								
Cadmium	2.44E-04	4.25E-05			1.35E-06			2.88E-04
Chromium	3.11E-04	5.41E-05			1.72E-06			3.67E-04
Lead	1.11E-04	1.93E-05			6.13E-07			1.31E-04
Manganese	8.44E-05	1.47E-05			4.66E-07			9.96E-05
Nickel	4.67E-04	8.12E-05			2.58E-06			5.50E-04
Total Emissions	**60.28**	**7.29E-02**	**0.15**	**11.83**	**2.31E-03**	**3.69E-03**	**2.74E-02**	**72.37**

Potential to Emit After Controls (tons/yr)								
Emission Unit	**Process Heat Sources**	**SMR Heater**	**Storage Tanks**	**Loading Racks**	**Flare Pilot**	**Emergency Generator**	**Fugitives**	**Total HAP**
Organic HAPs								
Acetaldehyde						5.91E-05		5.91E-05
Acrolein						1.85E-05		1.85E-05
Benzene	6.25	8.12E-05	2.29E-02	0.14	2.58E-06	1.82E-03	1.39E-02	6.42
1,3-Butadiene	0.39						7.28E-04	0.39
Cumene	1.93E-02		2.55E-03	1.53E-02			3.64E-05	3.71E-02
Dichlorobenzene	2.67E-04	4.64E-05			1.47E-06			3.14E-04
Ethylbenzene	1.11		2.55E-03	1.53E-02			2.09E-03	1.13
Formaldehyde	1.67E-02	2.90E-03			9.20E-05	1.85E-04		1.98E-02
n-Hexane	0.40	6.96E-02	4.08E-02	0.24	2.21E-03		2.55E-04	0.76
Napthalene			1.27E-02	7.65E-02				0.09
Total PAH[1]						4.97E-04		4.97E-04
Toluene	4.12	1.31E-04	3.31E-02	0.20	4.17E-06	6.59E-04	9.14E-03	4.36
2,2,4-Trimethylpentane			2.04E-02	0.12				0.14
Xylenes	3.06		1.27E-02	7.65E-02		4.53E-04	1.27E-03	3.16
Inorganic HAPs								
Cadmium	2.44E-04	4.25E-05			1.35E-06			2.88E-04
Chromium	3.11E-04	5.41E-05			1.72E-06			3.67E-04
Lead	1.11E-04	1.93E-05			6.13E-07			1.31E-04
Manganese	8.44E-05	1.47E-05			4.66E-07			9.96E-05
Nickel	4.67E-04	8.12E-05			2.58E-06			5.50E-04
Total Emissions	**15.36**	**7.29E-02**	**0.15**	**0.89**	**2.31E-03**	**3.69E-03**	**2.74E-02**	**16.50**

Notes:
1. PAH = Polyaromatic Hydrocarbon, PAHs are considered HAPs, since they are Polycyclic Organic Matter

Appendix A: Emissions Calculations
Storage Tanks

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

A. VOC[1]

Tank ID	Product	Tank Description	Tank Construction[2]	Tank Capacity (gal)	Throughput (gal/day)	VOC PTE (lb/yr)	VOC PTE (tons/yr)
15011*	heavy	Heavy hydrocarbon certified stream	FR	56,000	2,200	0.20	*
15012*	heavy	Heavy hydrocarbon certified stream	FR	56,000	2,200	0.20	*
15101	heavy	Hydrotreater feed	IFR	265,000	54,000	2.13	1.07E-03
15111	heavy	Fractionator feed	IFR	265,000	54,000	1.91	9.55E-04
15121	distillate	Wax extraction feed	FR	127,200	24,000	88.98	4.45E-02
15211	naphtha	Naphtha certified stream	IFR	127,200	12,000	2261.95	1.13
15212	naphtha	Naphtha certified stream	IFR	127,200	12,000	2261.95	1.13
15311	distillate	Distillate certified stream	FR	265,000	35,000	197.60	9.88E-02
15312	distillate	Distillate certified stream	FR	265,000	35,000	197.60	9.88E-02
15411*	distillate	Wax certified	FR	265,000	9,500	77.56	*
15412*	distillate	Wax certified	FR	265,000	9,500	77.56	*
15421	distillate	Wax oil uncertified	FR	56,500	6,000	35.46	1.77E-02
15601*	distillate	Slop tank	FR	56,500	9,360,000	46.80	*
15602	distillate	Slop tank	FR	56,500	9,360,000	46.80	2.34E-02
Total of process/product tanks							*2.55*
15131*	MEK	Wax extraction solvent	IFR	8,400	300	244.00	*
15132*	toluene	Wax extraction solvent	IFR	8,400	300	94.60	*
Total							**2.55**

Notes:
1. Source: TANKS 4.0.9d report provided by the source, includes working and breathing losses
2. IFR-internal floating roof, FR-fixed roof
** Removed in renewal 151-43439-00067*

B. HAPs

HAP	Process/product tanks HAP/VOC[1] (weight %)	Process/product tanks HAP PTE (tons/yr)	Tank 15132 HAP (weight %)	Tank 15132 HAP PTE (tons/yr)	All Tanks PTE (tons/yr)
Benzene	0.9	0.02			2.29E-02
Cumene	0.1	0.00			2.55E-03
Ethylbenzene	0.1	0.00			2.55E-03
n-Hexane	1.6	0.04			4.08E-02
Naphthalene	0.5	0.01			1.27E-02
Toluene	1.3	0.03	100	*	3.31E-02
2,2,4-Trimethylpentane	0.8	0.02			2.04E-02
Xylenes	0.5	0.01			1.27E-02
Total HAPs		0.15		0.00E+00	0.15

Notes:
1. Source: Tbl 3-2 Gasoline HAP Vapor Profile, Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dspensing Facilities, Vol. I: Chapters, EPA 450/3-91-022a, Nov 1991
** Removed in renewal 151-43439-00067*

Subpart Kb notes:

Tank ID	Product	Tank Volume (gal)	Tank Volume (m^3)	Monthly Maximum Average Temperature (°F)	Monthly Maximum Average Temperature (°R)	A	B	True Vapor Pressure (psia)	True Vapor Pressure (kPa)	Subpart Kb Applicable
15101, 15111	heavy	265000	1003	83.4	543.4	11.70	11,288	1.15E-04	7.90E-04	N[1]
15211, 15212	naphtha	127200	482	83.4	543.4	11.69	5,416	5.59	38.54	Y
15311, 15312	distillate	265000	1003	83.4	543.4	12.31	9,029	1.35E-02	9.33E-02	N[1]
15601*	distillate	56500	214	83.4	543.4	12.31	9,029	1.35E-02	9.33E-02	N[1]
15602	distillate	56500	214	83.4	543.4	12.31	9,029	1.35E-02	9.33E-02	N[1]
15011*, 15012*	heavy	56000	212	83.4	543.4	11.70	11,288	1.15E-04	7.90E-04	N[1]
15121	distillate	127200	482	83.4	543.4	12.31	9,029	1.35E-02	9.33E-02	N[1]
15421	distillate	56,500	214	83.4	543.4	12.31	9,029	1.35E-02	9.33E-02	N[1]
15411*, 15412*	distillate	265000	1003	83.4	543.4	12.31	9,029	1.35E-02	9.33E-02	N[1]
15131*	MEK	8400	32	-	-	-	-	-	NA	N[2]
15132*	toluene	8400	32	-	-	-	-	-	NA	N[2]
				AP-42 Tbl 7.1-7 data for Toledo OH		coefficients for August eqn see Loading Racks tab				

Notes:
1. Pursuant to 40 CFR 60.110b(b), Subpart Kb is not applicable to storage vessels with a capacity greater than 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kPa.
2. Pursuant to 40 CFR 60.110b(a), Subpart Kb is not applicable to storage vessels with a capacity less than 75 m3.
** Removed in renewal 151-43439-00067*

Appendix A: Emission Calculations
Material Handling Operations

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Process	Conveyor Discharge ID (FPSn)	Number of Transfers	Number of Lines	Emission Factor[1] (lb/ton)	Maximum Conveyor Throughput[2] (tons/hr)	Maximum Potential to Emit PM/PM10/PM2.5		
						Each transfer (lb/hr)	All Transfers (lb/hr)	All Transfers (tons/yr)
Unloading plastic from trucks to the tipping floor.	none	1	2	negligible[4]	6.62	-	-	-
front end loader transfer to elevating conveyor	-010	1	2	negligible	6.62	-	-	-
discharge to horizontal initial sort belt conveyor	-020	1	2	negligible	6.62	-	-	-
discharge to pre-shredder loading	-040	1	2	negligible	6.62	-	-	-
Pre-shredder discharge to elevating belt conveyor	-preshred	1	2	negligible	6.62	-	-	-
discharge to final sort conveyor	-060	1	2	negligible	6.62	-	-	-
final sort discharge to pre-shredder loading	-070	1	2	negligible	6.62	-	-	-
discharge to re-shredder loading	-080	1	2	negligible	6.62	-	-	-
Re-shredder discharge to elevating belt conveyor	-reshred	1	2	negligible	6.62	-	-	-
Conveyor discharge to dryer	-110	1	2	negligible	6.62	-	-	-
dryer discharge to elevating belt conveyor	-dryer	1	2	0.003	6.62	1.98E-02	0.04	0.17
conveyor discharge to pelletizer	-130	1	2	0.003	6.62	1.98E-02	0.04	0.17
pelletizer discharge to conveyor[5]	-160	1	2	0.003	6.62	1.98E-02	0.04	0.17
Conveyor discharge to storage bin[6]	-bin	1	2	0.003	6.62	1.98E-02	0.04	0.17
Front end loader transfer to the pellet loader[6]	none	1	2	0.003	6.62	1.98E-02	0.04	0.17
discharge to transfer conveyor	-170	1	2	0.003	6.62	1.98E-02	0.04	0.17
discharge to feed conveyors	-180	1	2	0.003	6.62	1.98E-02	0.04	0.17
conveyors discharge to extruders	-190-y	3	2	0.003	3.31	9.92E-03	0.06	0.26
Total							**0.34**	**1.48**

Notes:

1. Emission factor source: Conveyor transfer point, SCC-3-05-020-06, AP-42 Tbl 11.19.2-2 (August 2004)
Emission factor for crushed stone processing used as a worst case for clean, dry material.
2. Maximum capacity of the equipment is 6 metric tons(6.615 US tons) per hour.
3. Throughput is bottleneckedby the capacity of the plastics-to-fuel processors, 6,000 lb of dry feedstock per hour.
4. Moisture content of plastics delivered to the source is expected to be 20% by weight. The high water content is expected to make particulate emissions negligible at all steps before the dryer discharge. In the AP-42 section referenced, wet material is considered to be >1.5 percent water.
5. Emission factor for pellets assumed equal to dry, shredded material as a worst case. AP-42 Table 9.9.1-2, note e, states that feed shipping EF (SCC 3-02-008-03) of 0.0033 lb/ton is expressly not pelletized feed, suggesting that emissions from pelletized material are expected to be lower.
6. Worst case process includes pellet storage in the bin. Without buffer storage, the process will have one less transfer point.

Methodology
PM10 and PM2.5 assumed equal to PM as worst case analysis.
Potential to Emit (lb/hr) = Conveyor Throughput (tons/hr) x Number of Conveyors x Number of Lines x Emission Factor (lb/ton)
PTE (tons/yr) = PTE (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

Appendix A: Emissions Calculations
Feed Preparation Processes

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

A. Shredding, Sorting, and Re-Shredding

Unit ID	Gas Flow Rate (ACFM)	Outlet Loading (gr/dscf)	Control Efficiency	PM/PM/10/PM2.5 Emissions			
				Controlled		Uncontrolled	
				(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Baghouse DC-1	5000	0.03	99%	1.29	5.63	128.57	563.14

DSCF assumed equal to ACF for ambient conditions.

B. Dryers

Unit Throughput (tons/hr)	Number of Units	Emission Factor PM/PM10/PM2.5 (lb/ton)	Potential to Emit PM/PM10/PM2.5		
			single unit	all units	
			(lb/hr)	(lb/hr)	(tons/yr)
6.62	2	0.22	1.46	2.91	12.75

Emission factor source: AP-42 Table 9.9.1-1, column dryer (SCC 3-02-005-27) chosen as a worst case because AP-42 does include emission factors for drying shredded plastic. PM10 and PM2.5 assumed equal to PM as worst case conditions.

C. Extruders

Unit Throughput (tons/hr)	Units per Line	Number of Lines	Emission Factor PM/PM10/PM2.5 (lb/ton)	Potential to Emit PM/PM10/PM2.5		
				single unit	all units	
				(lb/hr)	(lb/hr)	(tons/yr)
3.00	2	2	0.0958	0.29	1.15	5.04

Emission factor source: Extruder, plastic products mfg, SCC 3-08-010-02, Emission Calculation Fact Sheet #9847, Plastic Production and Products Manufacturing, Michigan DEQ, rev. 11/05. Reference included a VOC emission factor, but AP-42 text describes VOC emissions as consisting of reactants and blowing agent. Since the feedstock at the source is post-manufacturing material, reactant and blowing agent VOC will be neglibible.

Methodology
Controlled PTE (lb/hr) = Gas Flow Rate (acfm) x Outlet Loading (gr/dscf) x 60 (min/hr) / 7,000 (gr/lb) *Shredding*
Single Unit PTE (lb/hr) = Unit Throughput (tons/hr) x Emission Factor (lb/ton) *Dryers and Extruders*
All Units PTE (lb/hr) = Single Unit PTE (lb/hr) x Number of Units *Dryers*
All Units PTE (lb/hr) = Single Unit PTE (lb/hr) x Units per Line x Number of Lines *Extruders*
PTE (tons/yr) = PTE (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Uncontrolled PTE = Controlled PTE x [1 - Control Efficiency (%)/100] *Shredding*

Appendix A: Emissions Calculations
Natural Gas and Offgas Combustion
MM BTU/HR <100

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Description	Number	Capacity (MMBtu/hr) Unit	Total
Fluidized bed dryers	2	4.50	9.00
hot oil heaters	2	6.00	12.00
processors[7]	4	6.00	24.00
boiler	1	0.85	0.85
fractionator heater	1	4.46	4.46
hydrotreating heater	1	1.43	1.43
Total			**51.74**

1. Criteria Pollutants

A. Natural Gas Only

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
51.74	1020	444.4

	Pollutant						
	PM[1]	PM10[1]	direct PM2.5[1]	SO2	NOx[2]	VOC	CO
Emission Factor in lb/MMCF AP-42, Ch 1.4	1.9	7.6	7.6	0.6	100	5.5	84
Potential Emission in tons/yr	0.42	1.69	1.69	0.13	22.22	1.22	18.66

B. Normal Operation: Process fuel gas ombustion (80% of combustion capacity), NG (20% of combustion capacity)

	Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
20% of demand natural gas	10.35	1020	88.9

	Pollutant						
	PM[1]	PM10[1]	direct PM2.5[1]	SO2	NOx[2]	VOC	CO
Emission Factor in lb/MMCF AP-42, Ch 1.4	1.9	7.6	7.6	0.6	100	5.5	84
Potential Emission in tons/yr (natural gas combustion fraction only)	0.08	0.34	0.34	0.03	4.44	0.24	3.73

	Heat Input Capacity MMBtu/hr	HHV[3] mmBtu/mmscf	Potential Throughput MMCF/yr
80% demand process fuel gas	41.39	825	439.5

	Pollutant						
	PM[1]	PM10[1]	direct PM2.5[1]	SO2	NOx[2]	VOC	CO
Emission Factor in lb/MMCF AP-42, Ch 1.4	1.9	7.6	7.6	0.6	100	n/a	84
Potential Emission in tons/yr (AP-42 emission factors)	0.42	1.67	1.67	0.13	21.98	n/a	n/a
Site Specific Emission Factors (lb/MMCF): *VOC, CO - process fuel gas composition data from source*						30312.5	24385.66
Potential Emission in tons/yr site specific emission factors						6661.30	5358.84
Potential Emission in tons/yr[4] (off gas combustion fraction only)	0.42	1.67	1.67	0.13	21.98	6661.30	5358.84
PTE (80% Offgas + 20% NG)	**0.50**	**2.01**	**2.01**	**0.16**	**26.42**	**6661.55**	**5362.58**

Appendix A: Emissions Calculations
Natural Gas and Offgas Combustion
MM BTU/HR <100

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

C. 100% Process Fuel Gas Combustion[5]

	Heat Input Capacity MMBtu/hr	HHV[3] mmBtu / mmscf	Potential Throughput MMCF/yr
100% demand process fuel gas	51.74	825	549.4

	Pollutant	
Site Specific Emission Factors (lb/MMCF):	VOC	CO
this is being conducted to determine the lb/hr PTE, which will be the limit for testing	30312.5	24385.66
VOC, CO - process fuel gas composition data from source		
Potential Emission in tons/yr	**8326.63**	**6698.55**

D. Total Potential to Emit

	Pollutant						
	PM	PM10	direct PM2.5	SO2	NOx	VOC	CO
Potential to Emit in tons/yr[6]							
NG only	0.42	1.69	1.69	0.13	22.22	1.22	18.66
NG with 80% process fuel gas	**0.50**	**2.01**	**2.01**	**0.16**	**26.42**	6661.55	5362.58
100% process fuel gas	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**8326.63**	**6698.55**
					Control Efficiency of Offgas Combustion	**98.00%**	**98.70%**
Potential to Emit After Control (tons/yr)	**0.50**	**2.01**	**2.01**	**0.16**	**26.42**	**166.53**	**87.08**
Potential to Emit After Issuance (tons/yr)	**0.50**	**2.01**	**2.01**	**0.16**	**26.42**	**71.24**	**87.08**

E. Compliance Determination Formula

VOC content of process fuel gas: 1521.69 lb/hr
Process fuel gas flow rate 41.39 MMBtu/hr / 825.00 MMBtu/MMCF = 5.02E-02 MMCF/hr, based on design (80% of heat input)

VOC content of the process fuel gas, from model 1521.69 lb VOC/hr / 5.02E-02 MMCF/hr = 30329.39 lb/MMCF
30329.39 lb/MMCF / 2,000 lb/ton = 15.16 tons VOC/MMCF

Emission factor after BACT (98% control) 0.303 tons/MMCF

Notes:
1. 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.
2. Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
3. HHV for process fuel gas provided by the source, based on engineering models.
4. Greater of AP-42 emission factor or site-specific factor
5. Section C is included to establish the worst case PTE to determine testing conditions.
6. Worst case PTE shown in **bold** type is greater of the three scenarios: 100% natural gas, 80:20 process fuel gas-natural gas, or 100% process fuel gas
7. FESOP and HAP limits allow only 4 of 6 processors to operate at one time

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

F. Hazardous Air Pollutants (HAPs)

			Scenario 1 100% Natural Gas	Scenario 2 80% Process Fuel Gas:20% NG			Worst Case HAP PTE Scenarios 1 & 2	PTE @ 100% Process Fuel Gas	PTE After Issuance
	AP-42 EF NG (lb/MMCF)	HAP EF Process Fuel Gas (lb/MMCF)	HAP PTE 100% NG (tons/yr)	HAP PTE 20% NG (tons/yr)	HAP PTE Process Fuel Gas 80% of demand (tons/yr)	Total for Scenario (tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Organic HAPs							**HAP Control Efficiency from Combustion**		**85.00%**
Benzene	2.10E-03	151.59	4.67E-04	9.33E-05	33.31	**33.31**	33.31	41.64	6.25
1,3 Butadiene		1.75			0.39	0.39	0.39		0.39
Cumene		0.09			1.93E-02	1.93E-02	1.93E-02		0.02
Dichlorobenzene	1.20E-03		**2.67E-04**	5.33E-05		5.33E-05	2.67E-04		0.00
Ethylbenzene		5.04			1.11	1.11	1.11		1.11
Formaldehyde	7.50E-02		**1.67E-02**	3.33E-03		3.33E-03	1.67E-02		0.02
n-Hexane	1.80E+00	0.61	0.40	8.00E-02	0.13	0.21	0.40		0.40
Toluene	3.40E-03	100.00	7.55E-04	1.51E-04	21.98	**21.98**	21.98	27.47	4.12
Xylenes		13.94			3.06	3.06	3.06		3.06
Inorganic HAPs									
Cadmium	1.10E-03		**2.44E-04**	4.89E-05		4.89E-05	2.44E-04		2.44E-04
Chromium	1.40E-03		**3.11E-04**	6.22E-05		6.22E-05	3.11E-04		3.11E-04
Lead	5.00E-04		**1.11E-04**	2.22E-05		2.22E-05	1.11E-04		1.11E-04
Manganese	3.80E-04		**8.44E-05**	1.69E-05		1.69E-05	8.44E-05		8.44E-05
Nickel	2.10E-03		**4.67E-04**	9.33E-05		9.33E-05	4.67E-04		4.67E-04
Total HAPs			**0.42**			**60.08**	**60.28**		**15.36**

Notes:
Data from engineering model, provided by the source 2/3/2016
The five highest organic and metal HAPs emission factors from AP-42 Table 1.4-3 are provided above.
PTE at 100% process fuel gas combustion included to establish testing requirements

Appendix A: Emissions Calculations
Non-Condensible Gas Composition[1]

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Process fuel gas volume[2] 5.02E-02 MMCF/hr

	Unrestricted PTE[3] 6 Processors		Bottlenecked PTE 4 Processors		
	(lb/hr)	(tons/yr)	Total Pollutant (lb/hr)	Emission Factor (lb/MMCF)	Potential to Emit[4] (tons/yr)
NC gas to fuel gas system	5264.55		3509.70		
Non-VOC components					
Water (H_2O)	18.57		12.38		
Hydrogen (H_2)	223.35		148.90		
Oxygen (O_2)	2.15		1.43		
Hydrogen sulfide (H_2S)	0		0		
Hydrogen chloride (HCl)	0		0		
Methane (CH_4)	115.62		77.08		
Carbon monoxide (CO)	1836.24	**8042.73**	1224.16	24385.66	**5361.82**
Carbon dioxide (CO_2)	402.74		268.49		
Nitrogen (N_2)	374.93		249.95		
Sulfuric acid (H_2SO_4)	0		0		
Sodium hydroxide (NaOH)	0		0		
Ammonia	8.43		5.62		
Subtotal (non-VOC)	2982.02		1988.01		
VOC in process fuel gas	**2282.54**	**9997.50**	**1521.69**	30312.55	**6665.00**

	Unrestricted PTE 6 Processors		Bottlenecked PTE 4 Processors		
HAPs	(lb/hr)	(tons/yr)	Total Pollutant (lb/hr)	Emission Factor (lb/MMCF)	Potential to Emit (tons/yr)
Organics					
Benzene	11.42	50.00	7.61	151.59	33.33
1,3 Butadiene	0.60	2.63	0.40	7.97	1.75
Cumene	0.03	0.13	0.02	0.40	8.76E-02
Ethylbenzene	1.73	7.56	1.15	22.91	5.04
n-Hexane	0.21	0.92	0.14	2.79	0.61
Toluene	7.53	32.98	5.02	100.00	21.99
Xylenes	1.05	4.60	0.70	13.94	3.07
Total HAPs		**98.81**			**65.88**

Notes:
1. Data from engineering model, provided by the source 5/12/16, four processors
2. Based on process fuel gas supplying 80% of the process heat demand at 825 MMBtu/MMCF Four processors operating at maximum capacity of two FPS.
3. Unrestricted PTE based on 4-processor model scaled to 6 processors operating. In practice, processor capacity is bottlenecked by the capacity to process feedstock.
4. Potential to Emit based on process fuel gas stream providing 80% of the heat input demand

Methodology
VOC in process fuel gas (lb/hr) = NC Gas to Fuel Gas System (lb/hr) - Subtotal (non-VOC) (lb/hr)
Emission Factor (lb/MMCF) = Total Pollutant (lb/hr) / Process Fuel Gas Volume (MMCF/hr)
PTE (tons/yr) = Totals (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

Appendix A: Emission Calculations
Fuel Combustion Limits

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Pollutant	*PTE After Issuance	
	(tpy)	(lb/hr)
VOC	71.24	16.26
CO	87.08	19.88
Benzene	6.25	1.43
Toluene	4.12	0.94

*PTE of combustion processes, when combusting 100% process fuel gas

Unit	Q (MMBtu/hr)	Q/Q_{tot}*	VOC 16.26 x Q/Qtot* (lb/hr)	CO 19.88 x Q/Qtot* (lb/hr)	Benzene 1.43 x Q/Qtot* (lb/hr)	Toluene 0.94 x Q/Qtot* (lb/hr)
FPS 1 Dryer	4.50	0.09	1.41	1.72	0.12	8.10E-02
FPS 2 Dryer	4.50	0.09	1.41	1.72	0.12	8.10E-02
FPS 1 Hot Oil Heater	6.00	0.12	1.88	2.30	0.17	0.11
FPS 2 Hot Oil Heater	6.00	0.12	1.88	2.30	0.17	0.11
R-12001 (Processor 1)	6.00	0.12	1.88	2.30	0.17	0.11
R-22001 (Processor 2)	6.00	0.12	1.88	2.30	0.17	0.11
R-32001 (Processor 3)	6.00	0.12	1.88	2.30	0.17	0.11
R-42001 (Processor 4)	6.00	0.12	1.88	2.30	0.17	0.11
R-52001 (Processor 5)	6.00	0.12	1.88	2.30	0.17	0.11
R-72001 (Processor 7)	6.00	0.12	1.88	2.30	0.17	0.11
H-14101 (Hydrotreater heater)	1.43	0.03	0.44	0.54	3.90E-02	2.60E-02
Fractionator Heater	4.46	0.09	1.40	1.71	0.12	8.10E-02
Fractionator Boiler	0.85	0.02	0.26	0.32	2.30E-02	1.50E-02
Total, Q_{tot}*(with FESOP and HAP limits)	51.74					
Total Q_{tot} (without FESOP and HAP limits)	63.74					

Due to FESOP and HAP limits, Q_{tot} only includes 4 out of the 6 processors

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Includes:

Description	Number	Capacity (MMBtu/hr) Unit	Total
SMR Heater	1	9.00	9.00

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
9.00	1020	77.29

	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	7.34E-02	0.29	0.29	2.32E-02	3.86	0.21	3.25

*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

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	n-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	8.12E-05	4.64E-05	2.90E-03	6.96E-02	1.31E-04	**7.27E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.93E-05	4.25E-05	5.41E-05	1.47E-05	8.12E-05	**2.12E-04**
					Total HAPs	**7.29E-02**
					Worst HAP	**6.96E-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.

Appendix A: Emissions Calculations
Fugitive Losses

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

A. VOC

Component	Service Type	Component Count[1]	Emission Factor[2] (kg/hr/source)	Potential to Emit VOC	
				(lb/hr)	(tons/yr)
Valves	Light liquid	454	4.30E-05	4.29E-02	0.19
Pump seals	Light liquid	81	5.40E-04	9.62E-02	0.42
Connectors and flanges	All	295	8.00E-06	5.19E-03	2.27E-02
Total					**0.63**

Notes:
1. Design component counts provided by the source, includes dewaxing system (SPR 151-39409-00067).
2. Emission factor source: Table 2-3, Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, November 1995 non-methane organic compounds.

Methodology
PTE (lb/hr) = Component Count x Emission Factor (kg/hr/source) x 2.2 (lb/kg)
PTE (tons/yr) = PTE (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

B. HAPs

HAP	NC Gas Composition		PTE
	HAP PTE[1]	HAP Fraction by Weight	(tons/yr)
Organics			
Benzene	33.33	2.19E-02	1.39E-02
1,3-Butadiene	1.75	1.15E-03	7.28E-04
Cumene	0.09	5.76E-05	3.64E-05
Ethylbenzene	5.04	3.31E-03	2.09E-03
n-Hexane	0.61	4.03E-04	2.55E-04
Toluene	21.99	1.44E-02	9.14E-03
Xylenes	3.07	2.01E-03	1.27E-03
Total VOC in NC gas	1521.69		
Total HAPs			**2.74E-02**

Notes:
1. from "NC Gas composition" tab

Methodology
HAP Fraction by Weight = HAP PTE (lb/hr) / Total VOC in NC Gas (lb/hr) *(from NC gas composition tab)*
HAP PTE (tons/yr) = VOC PTE (tons/yr) x HAP Fraction by Weight

Appendix A: Emissions Calculations
Product Loading Racks

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Emissions from loading petroleum products can be estimated using the following expression (Eqn 1, Chapter 5.2, AP-42, June 2008):

L_L = 12.46 SPM/T

Where L_L = Loading Loss (lb VOC/kgal[1])
S = 1.45 worst case, splash loading, clean tank (Tbl 5.2-1, AP-42)
T = 538 ºR, ambient temperature
M = vapor molecular weight, Tbl 7.1-2, AP-42
P = true vapor pressure[2], psia, at temperature T

A. VOC

Uncontrolled PTE						
Product	Annual throughput per lane, 4 processors (288 bbl/day/processor) (gal/yr)	Number of Lanes	M (g/g-mole)	P (psia)	L_L (lb/kgal)	VOC PTE[3] (tons/yr)
Naphtha	17,660,160	2	68	5.06	11.55	**203.95**
Diesel	17,660,160	2	130	1.15E-02	5.00E-02	0.88
Heavy	17,660,160	2	190	9.31E-05	5.94E-04	0.01
					Uncontrolled PTE (tpy)	**203.95**

PTE After Issuance					
Product	Limited Throughput (gal/yr)	M (g/g-mole)	P (psia)	L_L (lb/kgal)	VOC PTE (tons/yr)
Naphtha	17,660,160	68	5.06	11.55	
				Limited VOC PTE Before Controls	**101.97**
VOC Control Efficiency = 98%				**VOC PTE after Issuance (tpy)**	**2.04**
				(lb/kgal)	**0.231**

B. HAP

HAP Control Efficiency (%) = 85.00%

HAP	HAP/VOC (wt%)	Potential to Emit		
		Uncontrolled (tons/yr)	After Issuance (tons/yr)	After Issuance (lb/kgal)
Benzene	0.9	1.84	0.14	1.56E-02
Cumene	0.1	0.20	1.53E-02	1.73E-03
Ethylbenzene	0.1	0.20	1.53E-02	1.73E-03
n-Hexane	1.6	3.26	0.24	2.77E-02
Naphthalene	0.5	1.02	7.65E-02	8.66E-03
Toluene	1.3	2.65	0.20	2.25E-02
2,2,4-Trimethylpentane	0.8	1.63	0.12	1.39E-02
Xylenes	0.5	1.02	7.65E-02	8.66E-03
Total HAPs		11.83	0.89	

Source: Tbl 3-2 Gasoline HAP Vapor Profile, Technical Guidance-Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities, Vol. I: Chapters, EPA 450/3-91-022a, Nov 1991.
The HAP profile is used because emissions from truck loading operations are determined by the vapors from the last product transported, motor gasoline as a worst case for this source.

Notes:
1. kgal = 1,000 gallons
2. Vapor pressure calculations, based on Eqn 1-24, AP-42 Section 7.1.3:
P = exp [A-(B/T)] where the constants A and B are found through regression analysis of data in AP-42 Table 7.1-2:

Product	*Table 7.1-2 Name*	*A*	*B*
naphtha	*gasoline, RVP 7*	*11.69*	*5,416*
diesel	*distillate fuel oil No.2*	*12.31*	*9,029*
heavy	*Residual oil No. 6*	*11.70*	*11,288*

*3. Worst case VOC PTE shown in **bold** type based on 100% of the plant throughput as the given product*

Methodology
Uncontrolled VOC PTE (tons/yr) = Annual Throughput per Lane (gal/yr) x Number of Lanes / 1,000 (gal/kgal) x L_L (lb/kgal) / 2,000 (lb/ton)
Uncontrolled HAP PTE (tons/yr) = Uncontrolled VOC PTE (tons/yr) x HAP/VOC (wt %) / 100
Limited VOC PTE Before Controls (tons/yr) = Limited Throughput (gal/yr) / 1,000 (gal/kgal) x L_L (lb/kgal) / 2,000 (lb/ton)
VOC PTE After Issuance (tons/yr) = Limited VOC PTE Before Controls (tons/yr) x (1 - VOC Control Efficiency (%)/100)
HAP PTE After Issuance (tons/yr) = Limited VOC PTE Before Controls (tons/yr) x [HAP/VOC (wt %) / 100] x [1 - HAP Control Efficiency (%)/100]
PTE After Issuance (lb/kgal) = PTE After Issuance (tons/yr) x 2,000 (lb/ton) / [Limited Throughput (gal/yr) / 1,000 (gal/kgal)]

Appendix A: Emission Calculations
Mechanical Draft Cooling Tower

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Circulating water flow rate (W_c)	82.8 gal/min	provided by the source
Drift loss	0.02%	Default value from AP-42, Ch 13.4

Emission Factor ($lb/10^3$ gal)	PM/PM10/PM2.5 Emissions	
	(lb/hr)	(tons/yr)
0.019	0.09	0.41

Emission factor source: Table 13.4-1, AP-42 5th ed., January 1995

Methodology
Emissions (lb/hr) = Emission Factor ($lb/10^3$ gal) x Circulating water flow rate (gal/min) / 1,000 ($gal/10^3$ gal) x 60 (min/hr)
Emissions (tons/yr) = Emissions (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Plastic delivery (entering plant) (one-way trip)	1.0	12.7	12.7	15.0	190.5	400	0.076	1.0	351.2
Plastic delivery (leaving plant) (one-way trip)	1.0	12.7	12.7	40.0	508.0	400	0.076	1.0	351.2
Product tanker (entering plant) (one-way trip)	1.0	9.7	9.7	15.0	145.5	400	0.076	0.7	268.2
Product tanker (leaving plant) (one-way trip)	1.0	9.7	9.7	40.0	388.0	400	0.076	0.7	268.2
		Totals	**44.8**		**1232.0**			**3.4**	**1238.8**

Average Vehicle Weight Per Trip = 27.5 tons/trip
Average Miles Per Trip = 0.08 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 sand & gravel processing, plant road
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	27.5	27.5	27.5	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	6.99	1.78	0.18	lb/mile
Mitigated Emission Factor, Eext =	4.60	1.17	0.12	lb/mile
Dust Control Efficiency =	0%	0%	0%	

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Plastic delivery (entering plant) (one-way trip)	1.23	0.31	0.03	0.81	0.21	0.02	0.81	0.21	0.02
Plastic delivery (leaving plant) (one-way trip)	1.23	0.31	0.03	0.81	0.21	0.02	0.81	0.21	0.02
Product tanker (entering plant) (one-way trip)	0.94	0.24	0.02	0.62	0.16	0.02	0.62	0.16	0.02
Product tanker (leaving plant) (one-way trip)	0.94	0.24	0.02	0.62	0.16	0.02	0.62	0.16	0.02
Totals	**4.33**	**1.10**	**0.11**	**2.85**	**0.73**	**0.07**	**2.85**	**0.73**	**0.07**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Flare Pilot Combustion

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Includes:

Description	Number	Capacity (MMBtu/hr) Unit	Total
Flare X-400 pilot burners	4	7.14E-02	0.29

Heat Input Capacity MMBtu/hr	HHV MMBtu/MMCF	Potential Throughput MMCF/yr
0.29	1020	2.5

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.00	0.01	0.01	0.00	0.12	0.01	0.10

*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

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.6E-06	1.5E-06	9.2E-05	2.21E-03	4.2E-06	**2.31E-03**

	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	6.1E-07	1.3E-06	1.7E-06	4.7E-07	2.6E-06	**6.7E-06**
					Total HAPs	**2.31E-03**
					Worst HAP	**2.21E-03**

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.

Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Diesel Emergency Generator

Company Name: Brightmark Plastics Renewal Indiana 2 LLC
Source Address: 3240 W 800 S, Ashley, IN 46705
Permit No.: T151-43439-00067
Reviewer: Wyman Clark
Date: May, 2021

Output Horsepower Rating (hp)	1340.0	Two (2) 670 HP Horsepower generators in parallel
Maximum Hours Operated per Year	500	
Potential Throughput (hp-hr/yr)	670,000	
Sulfur Content (S) of Fuel (% by weight)	0.050	

	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-04 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.23	0.13	0.13	0.14	8.04	0.24	1.84

*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	Xylenes	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	1.82E-03	6.59E-04	4.53E-04	1.85E-04	5.91E-05	1.85E-05	4.97E-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)	**3.69E-03**

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jay Schabel
Brightmark Plastics Renewal Indiana 2 LLC
3240 W 800 S
Ashley, IN 46705

DATE: June 22, 2021

FROM: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
FESOP Renewal
151-43439-00067

This notice is to inform you that a final decision has been issued for the air permit application referenced above.

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. In addition, the Notice of Decision has been sent to the OAQ Permits Branch Interested Parties List and, if applicable, the Consultant/Agent and/or Responsible Official/Authorized Individual.

The final decision and supporting materials are available electronically; the original signature page is enclosed for your convenience. The final decision and supporting materials available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option **by Permit Number**, then enter permit 43439

and

IDEM's Virtual File Cabinet (VFC): https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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, or have difficulty accessing the documents online, 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 8/20/20-acces via website

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

June 22, 2021

TO: Carnegie Library of Steuben County

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Brightmark Plastics Renewal Indiana 2 LLC
Permit Number: 151-43439-00067

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 1/9/2017

Mail Code 61-53

IDEM Staff	TAWEAVER 6/22/2021 Brightmark Plastics Renewal Indiana 2 LLC 151-43439-00067 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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2		Steuben County Board of Commissioners 317 S Wayne Suite 2H Angola IN 46703 *(Local Official)*									
3		Steuben County Health Department 317 S. Wayne St, Community Center Suite 3A Angola IN 46703-1938 *(Health Department)*									
4		Carnegie Public Library of Steuben County 322 S Wayne St Angola IN 46703-1990 *(Library)*									
5		Ms. Diane Hanson 490 E 300 N Angola IN 46703 *(Affected Party)*									
6		Orland Town Council P.O. Box 445 Orland IN 46776 *(Local Official)*									
7		Revocable Trust of Belva H Presley 3652 CR 7 Avilla IN 46710 *(Affected Party)*									
8		Eben R Carper 3105 W 700 S Ashley IN 46705 *(Affected Party)*									
9		Wayne and Carol Klink Klink Trucking, LLC 6350 S 725 W Pleasant Lake IN 46779 *(Affected Party)*									
10		Randy McEntarfer Ashley Town Council 500 S Gonser Ashley IN 46705 *(Local Official)*									
11		Barbara Knecht HZW Environmental Consultants LLC 6105 Heisley Rd Mentor OH 44060 *(Consultant)*									
12		Lisa Green The Journal Gazette 600 W Main St Fort Wayne IN 46802 *(Affected Party)*									
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