ADEQ
ARKANSAS
Department of Environmental Quality

SEP 29 2016

William Huyck
Environmental Manager
Evergreen Packaging, Inc.
5201 Fairfield Road
Pine Bluff, AR 71601

Dear Mr. Huyck:

The enclosed Permit No. 0580-AOP-R14 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 6/6/2016.

After considering the facts and requirements of A.C.A. §8-4-101 et seq. as referenced by §8-4-304, and implementing regulations, I have determined that Permit No. 0580-AOP-R14 for the construction and operation of equipment at Evergreen Packaging, Inc. shall be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,

Stuart Spencer
Associate Director, Office of Air Quality

Enclosure: Final Permit

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72118-5317 / TELEPHONE 501-682-0744 / FAX 501-682-0880
www.adeq.state.ar.us

ADEQ
OPERATING
AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0580-AOP-R14

IS ISSUED TO:

Evergreen Packaging, Inc.
5201 Fairfield Road
Pine Bluff, AR 71601
Jefferson County
AFIN: 35-00016

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

February 24, 2012 AND February 23, 2017

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Stuart Spencer
Associate Director, Office of Air Quality

SEP 29 2016

Date

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List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM_{10}	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Evergreen Packaging, Inc.
AFIN:	35-00016
PERMIT NUMBER:	0580-AOP-R14
FACILITY ADDRESS:	5201 Fairfield Road Pine Bluff, AR 71601
MAILING ADDRESS:	5201 Fairfield Road Pine Bluff, AR 71601
COUNTY:	Jefferson County
CONTACT NAME:	William Huyck
CONTACT POSITION:	Environmental Manager
TELEPHONE NUMBER:	(870) 541-5892
REVIEWING ENGINEER:	Alexander Sudibjo
UTM North South (Y):	Zone 15: 3788082.41 m
UTM East West (X):	Zone 15: 596938.05 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Evergreen Packaging (Evergreen) owns and operates a pulp and paper mill and a chip mill in Pine Bluff, Jefferson County, Arkansas. The facility was constructed in 1957 and started operation in 1958. The facility has two paper machines which produce coated publication paper, newsprint and bleached paperboard. The facility produces wood chips and fuel wood for use at the facility. With this minor modification, the facility is increasing the annual hours of operation limit for the emergency engines (SN-114 through 119, SN-121, and SN-122) to 500 hours per calendar year. There are no changes in emissions.

Process Description

Primary operations at Evergreen include multiple fuel fired boilers, wood yard operations, chemical wood (kraft) pulping operations, mechanical (groundwood) pulping operations, chemical recovery operations, bleaching operations, papermaking operations, coating operations, finishing and shipping operations, and additional operations and equipment necessary to support these activities. Evergreen uses two types of pulping processes: the Kraft and the groundwood pulping processes. The entire kraft pulp at the mill is bleached. Primary operations at the Chip Mill include log handling, chipping, and debarking, and additional operations and equipment necessary to support these activities.

Power Operations

Power Operations at Evergreen include three steam and/or power generating units and associated processes and equipment. Three boilers, capable of firing multiple fuels, provide steam for mill production processes and power generation. The No. 1 Power Boiler (SN-13A/B) and No. 2 Power Boiler (SN-15A/B) are primarily natural gas fired combustion units that can also fire fuel oil (including No. 6, 5, 4, and 2). The third unit is a Bark Boiler (SN-01) that typically fires bark, dried sludge pellets and natural gas. Additional fuels that may be fired in the Bark Boiler include fuel oil (including No. 6, 5, 4, and 2), used oil, polyscrap, paper scrap, woodwaste, tire-derived fuel (TDF) and rice hulls. Insignificant emission units from this area include wet ash handling. For purposes of the Boiler MACT, SN-13 A/B is a unit designed to burn gas 1, SN-15 A/B is a limited use boiler, and SN-01 is a hybrid suspension grate boiler designed to burn biomass/bio-based solids.

Chemical Recovery Operation

Evergreen operates three liquor recovery systems that process combined kraft black liquor from both the hardwood and softwood pulping operations. Weak black liquor from the brownstock washers is routed to storage tanks before being sent to the evaporator lines (which are vented to the non-condensable gas/low volume high concentration gas control (LVHC) system). Soap is extracted from the evaporators and sent to storage. Liquor from the evaporators is concentrated to about 50% solids and sent to strong black liquor storage before being oxidized in the black liquor oxidation system.

Black liquor oxidation is used at Evergreen to control total reduced sulfur (TRS) emissions from the recovery boilers, which have direct contact evaporators (DCEs). Liquor oxidation transforms reactive sodium salts to sodium thiosulfate, a stable compound that will not produce TRS compounds when contacted with hot combustion gases. A low-sulfur (1% or less) petroleum based additive (e.g. No. 2 Fuel Oil or Diesel) may also be added directly to the black liquor oxidation system during this stage in the process as a defoaming agent.

The solids content of the black liquor is raised in the Multi-Effect Evaporator Systems in preparation for firing in the Recovery Boilers. Two complete sets of Evaporator Systems are operated at Evergreen. The mill recovers cooking chemicals by firing black liquor into three direct contact recovery boilers: No. 2 Recovery Boiler (SN-02), No. 3 Recovery Boiler (SN-03), and No. 4 Recovery Boiler (SN-04). The organics from the liquor are combusted to generate heat for process steam while the inorganic chemicals collect in the bottom of the boilers in the form of molten smelt. The recovery boilers are also capable of firing natural gas and/or fuel oil. A defoaming agent may also be added directly to the black liquor feed stream to the recovery boilers, to ensure fuel input consistency. Each recovery boiler operates as an independent system, each with its own smelt dissolving tank, electrostatic precipitator (ESP), and exhaust stack.

The molten smelt from each recovery boiler is directed to one of three dedicated tanks where it is dissolved into weak wash or water to form green liquor, a prelude step to regenerating white liquor in the causticizing operation. The No. 2 Smelt Dissolving Tank (SN-06) is equipped with a demister pad, while the No. 3 Smelt Dissolving Tank (SN-07) and the No. 4 Smelt Dissolving Tank (SN-08) are equipped with venturi scrubber systems. These control devices are designed to capture particulates and gaseous pollutants and return them to the smelt tanks.

The Black Liquor Oxidation Tank (SN-21) and the Process Liquor Tanks (SN-58) are associated with the Chemical Recovery Operations at Evergreen. The Tank Summary section under SN-21 lists the Process Liquor Storage Tanks at the Pine Bluff Mill. Neither the Black Liquor Oxidation Tank nor the Process Liquor Storage Tanks are equipped with any pollution control devices.

To comply with MACT I requirements, Low Volume High Concentration (LVHC) gases and process condensates are collected from several sources in this area. The LVHC collection systems include digesters, the blow heat accumulator system, the surface condenser, the turpentine decanter, and the Multi-Effect Evaporator system hotwells, ejectors, and condensers. LVHC gases from the Multi-Effect Evaporators are routed through the surface condenser on their way to the two-stage multi-effect evaporator ejector. LVHC gases from the Multi-Effect Evaporator Ejector are routed to the Multi-Effect Evaporator Ejector Condenser for final condensing. Foul condensate from the surface condenser and the ejector condenser drops to the evaporator hotwell. LVHC gases from the ejector and hotwell are routed to either the existing No. 1 or No. 2 Lime Kilns (SN-09, SN-10) for destruction after passing through the NCG Pre-Scrubber and NCG Gas Cooler.

Caustic Plant

In the causticizing /lime recovery area, dissolved smelt (green liquor) from the smelt dissolving tanks is clarified and then mixed with lime (CaO) in the slaker (SN-11). The sodium salts in the green liquor react with the CaO to form white liquor and lime mud in the causticizers. This white liquor/lime mud slurry is then clarified to separate the white liquor from the lime mud. The white liquor is sent to the Digesters (see Pulping Area description), and the lime mud is conditioned, thickened, and burned in one of the lime kilns, No. 1 Lime Kiln (SN-09) or No. 2 Lime Kiln (SN-10) to form CaO. The lime kilns are equipped with water venturi scrubbers, and the Slaker is equipped with a gravity scrubber.

Burned lime from the lime kilns is conveyed to two silos for storage prior to being added to the Slaker. Evergreen also purchases fresh lime, which is conveyed from trucks to a silo. Fresh lime is also added at the Slaker. The dust from truck unloading, fresh lime silo, reburned lime silo, and closed conveying to the kilns is controlled with the Lime Handling Fugitives Dust Scrubber (SN-20). Fugitives from the causticizing area are grouped into Causticizing Fugitives (SN-48 and SN-59).

NCG gases from the pulping and chemical recovery areas are conditioned in a white liquor scrubber and then combusted in the lime kilns.

Pulping Area

In the pulping process, hardwood and/or softwood chips are fed to and cooked with white liquor in one of fourteen batch digesters (SN-51). The digesters may be operated in an independent manner. Pulp from a digester is blown to one of three blow tanks. The pulp slurry from the digesters is screened to remove knots (SN-44), then is washed and thickened in two separate lines prior to being sent for further processing. Additionally, the Groundwood Mill (SN-52) uses mechanical grinders to produce pulp for the groundwood process.

The fourteen batch digesters can be used by either the B-Line to handle softwood or by the C-Line to handle hardwood. Three digester blow tanks are associated with the fourteen batch digesters.

Both the B-line and C-line Brownstock Washer (SN-22, 23, and 44) consist of four stage washers. Washed pulp is then bleached in the B and C Bleach Plant Lines. The two sets of Multiple Effect Evaporators process the kraft black liquor from the pulping operations. The cooking chemicals are recovered by firing black liquor solids into direct contact recovery boilers. The organics from the liquor are combusted to generate heat for process steam while the inorganic chemicals collect in the bottom of the boilers in the form of molten smelt. The smelt is later used within the causticizing operation.

Vapors from the batch digesters are sent to the Blow Heat Recovery Evaporators to recover heat value and condense turpentine. The Turpentine Section (or Pine Gas Off Section) of the First Effect Evaporator serves as the Turpentine Condenser for the Pine Bluff Mill. A mixture of turpentine and condensate is transferred through the Condensate Cooler to the Turpentine Decanter. Vapors from the Turpentine Section and the Secondary Blow Heat Condensing

Section of the First Effect are transferred through the East and West Heat Exchangers (or Secondary Condenser/Pine Gas Off Condenser and Gas Cooling Section of the Surface Condenser, respectively). Condensate is collected in the Pre-Evaporator Foul Condensate Tank. Blow steam from the digesters is sent to the Blow Heat Accumulator as part of the heat recovery process.

Condensate is collected into the Main Foul Condensate Tank from the Blow Heat Accumulator, Pre-Evaporator Foul Condensate Tank, and the Turpentine Decanter Underflow Storage Tank to meet the mass collection and treatment requirements for MACT I.

Condensate from the Pre-Evaporator Foul Condensate Tank and the Blow Heat Accumulator will be routed to the Main Foul Condensate Collection Tank. The Turpentine Decanter Underflow Storage Tank will be piped directly to the suction of the Main Foul Condensate Collection Tank Pump. Then all condensate is hard-piped to the segregated zone of the Mill’s wastewater treatment system. Additionally, Evergreen will collect additional foul condensates, as needed, from the Pre-Evaporator Combined Condensates and/or the Multiple Effect Evaporator Sources to the Main Foul Condensate Collection Tank and subsequently through the existing hardpipe to the segregated zone of the wastewater treatment system to add compliance safety margin for both MACT 1, Phase 1 condensate collection and treatment and the MACT 1, Phase 2 CCA treatment requirements.

Bleaching Operations
Washed pulp from the B and C Pulp Lines is bleached in the B and C lines of the Bleach Plant (SN-24 through SN-27, SN-45, and SN-46). Both lines are capable of bleaching hardwood and/or softwood pulp. Each stage consists of a reaction tower, washer, and seal pit. Bleached pulp is stored prior to being sent to the papermaking areas. Each bleach plant line routes all chlorine dioxide towers, washers, and seal pits to the Bleach Plant Scrubber (SN-27).

Bleaching gases are generated from several sources. The existing bleaching collection system is for chlorinated gases from the B and C Lines Towers, Washers, and Seal Pits and the White Water Storage Tank (1B Seal Pit), the Bleach Plant chlorinated gases are routed to the Bleach Plant Scrubber for treatment. Methanol is used in the chlorine dioxide generation process: it is stored in the Methanol Tank (SN-55).

Papermaking Operations
Evergreen produces various types of paper for sale. The paper is produced from the No. 1 and No. 2 Paper Machines (SN-53 and SN-54). Evergreen’s products include a coated publication paper and/or newsprint utilizing groundwood, kraft pulp, and recycled pulp; and bleached paperboard using a mixture of pine and hardwood pulp from the bleach plant, bleached chemical thermal mechanical pulp (BCTMP), and recycled pulp. The papermaking operations include a process for reclaiming fiber from polyethylene coated paper. This paper may come from Evergreen or other facilities, and may include de-inking. Paper from the paper machines can go through the Extruders (SN-28 thru SN-40) or Off Machine Coater (SN-41 and 42) to apply a coating. The paper is cut and packaged for sale in a finishing and shipping operation.

Starch Silos are listed as an insignificant source for this area.

AKD Sizing Plant

Evergreen uses Alkyl Ketene Dimer (AKD) sizing at the No. 2 Paper Machine (SN-54) in the production of liquid packaging board. An on-site AKD sizing generation plant allows conversion of the AKD to a higher solids content (21%) version of the AKD (EVG2007).

The batch AKD sizing process is a three stage operation: premix preparation, processing, and adjustment. During the premix stage, starch, dispersant, and water are blended in a starch cooker. The mixture is cooked using direct steam injection. After cooking, aluminum sulfate is added along with sulfuric acid for pH adjustment. AKD is then melted by adding it to the hot mixture. Biocide is added at this point. During the processing stage, the mixture (premix) is homogenized and cooled through a series of heat exchangers. The product is then transferred to a storage tank, where it is tested and final adjustments (water addition) are made to meet product specifications prior to use at the No. 2 Paper Machine.

Maintenance, Fuel Storage, and Internal Combustion Engines

Maintenance operations at Evergreen include painting of equipment, as well as routine equipment and building upkeep. Fuel storage operations include fuel oil, kerosene, gasoline, and diesel storage and dispensing. Internal combustion (IC) engines include numerous stationary and portable backup engines. These engines provide power during maintenance activities, power outages, or emergency situations.

One of the engines, SN-120, is an 82 hp Detroit model 10347012 diesel-fired engine with an associated water pump. This engine serves as a back-up for the facility’s water pumping system, is operated periodically for maintenance and testing, is used for pumping water for cleaning at the Chip Mill, and is used when maintenance personnel perform hot work. It is classified as an existing non-emergency, non-black start CI stationary RICE under 40 CFR Part 63, Subpart ZZZZ.

One fuel oil storage tank, with an approximate capacity of 800,000 gallons, comprises the majority of fossil fuel storage capacity at the facility. Fuel oil is stored for use in mill combustion sources including boilers, kilns, and recovery boilers. Kerosene, gasoline, and diesel are stored at the facility in several small tanks for use in mobile equipment and stationary IC engines.

There are no significant emission sources from this area. All tanks that are Group A Insignificant Activities are listed within the Insignificant Activities Section of the permit.

Wastewater Collection and Treatment

The wastewater treatment system consists of many components, the first of which is a primary clarifier that removes solid material by settling in the quiescent clarifier over a period of several hours. The settled material is primarily bark and wood fragments, pulp fiber, sand, and grit. The settled material is intermittently and continuously removed from the bottom of the clarifier, pressed to remove free water and then either burned in the mill's bark boiler or used beneficially. The water from the primary clarifier travels approximately 7,000 feet, through a combination of pipes and open ditches to a lift station. From this lift station, the effluent is pumped to an 80 acre aerated stabilization basin (ASB #1). From ASB #1, the effluent flows past a mid-feather into a second aerated stabilization basin (ASB #2). ASB #2 is a 42 acre lagoon with mechanical aeration that serves as a polishing area. There is an adjacent 11 acre pond that flows back into ASB #1 that serves the segregated treatment area for MACT 1, Phase 1 and MACT1, Phase 2 compliance. From ASB #2, the water joins with treated water from an adjacent constructed wetland wastewater treatment system and discharges into Johnson's Lake. Johnson's Lake is a natural, reclaimed oxbow lake, and is used as a settling or polishing basin for the treatment system. It has approximately 100 acres of surface area, and is mechanically aerated when needed. Johnson's Lake discharges into the Arkansas River.

In accordance with 40 CFR 63, Subpart S, Evergreen currently collects foul condensate from selected named sources such as the Blow Heat Accumulator, Pre-Evaporator Foul Condensate Tank, and Turpentine Decanter Underflow Storage Tank to meet the MACT I, Phase 1 collection requirement of 11.1 pounds of methanol per oven dried ton of pulp (ODTP). The condensate from these three sources is routed to the Main Foul Condensate Collection Tank where it is then sent via hardpipe to the segregated zone of the wastewater treatment system. By incorporating the clean condensates alternative outlined in 40 CFR §63.447, Evergreen will collect, as needed, additional foul condensates from the Pre-Evaporator Combined Condensate Tank and/or the Multiple Effect Evaporator Sources. These condensates, if needed, will be routed to the Main Foul Condensate Collection Tank and subsequently sent through the existing hard pipe and into the segregated zone of the wastewater treatment system. The additional condensates can be used to provide compliance safety margin for MACT 1, Phase 1 condensate collection and treatment and the MACT 1, Phase 2 CCA requirements.

Cooling Towers

Evergreen operates several cooling towers (SN-102A, 102B, 103, 104, 105A, 105B, 106A, 106B, 107A, 107B, 108A, 108B, 109A, 109B, 110A, 110B, 111, and 112) as part of the papermaking operations, mechanical (groundwood) pulping operations, and operations at the mill's water treatment plant. Particulate emissions occur from the operation of a cooling tower when the liquid water is entrained in the air stream and carried out of the tower as "drift" droplets.

Additional Mill Operations

Evergreen maintains miscellaneous operations that support paper production. Miscellaneous operations in this area include wood supply, waste treatment and disposal, road traffic, process cooling, quality control, and other support operations that are not significant sources of regulated air pollutants. However, some of the additional mill operations are sources of regulated air pollutants, including the Chip Piles (SN-50), the Pulp Mill Road Fugitives (SN-56), and the Landfill Fugitives (SN-57).

Chip Mill Operations

The Chip Mill operations include log processing and handling, chip and bark handling, road traffic, maintenance activities, and other support operations. Fuel and oil storage operations include gasoline, diesel, hydraulic oil, and used oil.

Log processing begins with the logs being cut to length by the slasher, and then moved to one of two debarkers to remove bark. From the debarkers, the logs are sent to a chipper that discharges the chips into one of the two chip bins. If both bins are full, the chips are discharged to the ground until they are loaded into trucks. Currently, all chips are shipped to Evergreen, where they are used in the pulping operations.

Handling activities include conveyor transfer points and truck loading and unloading. The chipper, hog, and screens are included as transfer points. Products from the chip mill include chips and bark. Bark from the debarker is conveyed to the bark hog. Hogged fuel is then conveyed to a bark bin prior to being trucked to the mill where it is fired in the Bark Boiler. Chip Mill Fugitives are grouped as SN-100.

Logs, chips, and bark are all shipped into and/or out of the Chip Mill by truck on mill-wide haul roads. Chip Mill Road Fugitives are grouped as SN-101.

Fuel and oil storage tanks are listed as insignificant activities for the Chip Mill within the Insignificant Activities Section of the permit.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective March 14, 2016
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective March 14, 2016
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective March 14, 2016
40 CFR Part 60, New Source Performance Standards (NSPS) Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels
40 CFR Part 60, New Source Performance Standards (NSPS) Subpart BB—Standards for Performance for Kraft Pulp Mills
40 CFR Part 63, National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart S - National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry
40 CFR Part 63, NESHAP Subpart MM—National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills
40 CFR Part 63, NESHAP Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating
40 CFR Part 64, Compliance Assurance Monitoring
40 CFR Part 63, NESHAP Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR Part 60, NSPS Subpart IIII —Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR Part 63, NESHAP Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters
This facility is classified as a major source of greenhouse gas emissions.

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Plantwide Applicability Limitation (PAL)		PM	-	1143.8
		PM_{10}	-	836.1
		$PM_{2.5}$	-	726.1
		NOx	-	1458.1
		CO	-	2041.1
		SO_2	-	392.4
		VOC	-	1913.4
		TRS	-	833.4
		Lead	-	0.690
		H_2SO_4	-	17.07
		Fluorides	-	3.016
		CO_2e	-	1,969,346.7
HAPs		1,1,2-Trichloroethane*	0.61	2.20
		1,2,4-Trichlorobenzene*	1.7	6.08
		1,2-Dichloroethane*	0.3	0.68
		1,2-Dichloroethylene*	0.01	0.0205
		2,4-Dinitrotoluene*	0.01	0.01
		1,3-Butadiene*	0.25	0.26
		2,4,5-Trichlorophenol*	0.12	0.32
		1,1,2,2-Tetrachloroethane*	0.01	0.04
		Acetaldehyde*	2.08E+01	8.08E+01
		Acetophenone*	3.46	13.85
		Acrolein*	5.60E-01	2.17E+00
		Acrylonitrile*	0.06	0.12
		Benzene*	1.05	3.59
		Biphenyl*	0.37	1.11
		Carbon Disulfide*	1.38	4.99
		Carbon Tetrachloride*	1.03	3.54

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Carbonyl sulfide*	4.74	20.31
		Chlorine	1.64	6.31
		Chloroform*	2.84	9.09
		Chloromethane*	8.49	36.71
		Cumene*	0.76	2.69
		Cresol*	9.79	38.49
		Formaldehyde*	3.77	14.88
		Hexachlorobenzene*	5.10E-04	2.24E-03
		Hexachlorocyclopentadiene*	0.46	1.92
		Hexachloroethane*	9.83	38.83
		Hexane*	6.95	21.2
		Hydrochloric Acid	0.60	2.61
		Iodomethane*	0.15	0.46
		Methanol*	667.18	2001.14
		Methyl Isobutyl Ketone*	1.20	4.30
		Methylene Chloride	1.20	4.58
		Naphthalene*	2.46	9.25
		Pentachlorophenol*	5.40E-01	1.48E+00
		Phenol*	5.12	20.41
		Propionaldehyde*	3.08	9.88
		Propylene Dichloride*	0.09	0.41
		Styrene*	0.71	2.13
		Toluene*	0.78	2.43
		Vinyl Chloride*	0.09	0.30
		Xylene*	0.90	2.77
		Arsenic*	6.15E-02	7.64E-02
		Beryllium*	8.32E-04	1.43E-03
		Cadmium*	4.19E-02	4.86E-02
		Cobalt*	1.32E-01	2.48E-01
		Manganese*	0.46	1.67
		Mercury*	1.58E-03	5.53E-03
		Nickel*	0.76	3.20
		Phosphorus*	0.20	0.67
		Selenium*	0.11	0.11
		Polycyclic Organic Matter*	0.20	0.25
Air Contaminants **		Acetone	26.09	80.66
		Ammonia	31.9	139.4
		Chlorine Dioxide	0.26	1.10
SN-01	Bark Boiler	Acetone	0.09	0.36
		1,1,2-Trichloroethane	0.06	0.27

EMISSION SUMMARY

Source Number	Description	Pollutant	Emission Rates lb/hr	Emission Rates tpy
		1,2,4-Trichlorobenzene	0.03	0.12
		1,2-Dichloroethane	0.02	0.07
		2,4-Dinitrotoluene	0.01	0.01
		Acetaldehyde	0.1	0.42
		Acrolein	0.02	0.17
		Benzene	0.14	0.59
		Carbon Disulfide	0.07	0.29
		Carbon Tetrachloride	0.01	0.03
		Chloroform	0.02	0.08
		Chloromethane	0.02	0.05
		Cumene	0.01	0.04
		Formaldehyde	0.44	1.92
		Hexachlorobenzene	5.10E-04	2.24E-03
		Hexane	0.89	3.87
		Hydrochloric Acid	0.56	2.45
		Methanol	0.43	1.9
		Methyl Isobutyl Ketone	0.28	1.2
		Methylene Chloride	0.18	0.76
		Naphthalene	0.05	0.22
		Pentachlorophenol	2.22E-05	9.74E-05
		Phenol	0.01	0.05
		Propionaldehyde	0.02	0.07
		Styrene	0.04	0.14
		Toluene	0.02	0.06
		Vinyl Chloride	0.01	0.04
		Xylene	0.02	0.05
		Arsenic	0.01	0.01
		Beryllium	8.11E-06	3.66E-05
		Cadmium	0.01	0.01
		Cobalt	1.76E-03	7.71E-03
		Manganese	0.34	1.47
		Mercury	1.28E-04	5.59E-04
		Nickel	0.15	0.65
		Phosphorus	0.05	0.22
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.02	0.07
SN-13	No. 1 Power Boiler	Benzene	0.01	0.01
		Formaldehyde	0.05	0.20
		Hexane	1.06	4.64
		Naphthalene	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Toluene	0.01	0.03
		Xylene	0.01	0.01
		Arsenic	0.01	0.01
		Beryllium	3.02E-05	1.33E-4
		Cadmium	6.48E-04	2.84E-03
		Cobalt	0.01	0.03
		Manganese	0.01	0.02
		Mercury	1.53E-04	6.70E-04
		Nickel	0.10	0.50
		Phosphorous	0.02	0.05
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-15	No. 2 Power Boiler	Benzene	0.01	0.01
		Formaldehyde	0.05	0.20
		Hexane	1.06	4.64
		Naphthalene	0.01	0.01
		Toluene	0.01	0.03
		Xylene	0.01	0.01
		Arsenic	0.01	0.01
		Beryllium	3.02E-05	1.33E-4
		Cadmium	6.48E-04	2.84E-03
		Cobalt	0.01	0.03
		Manganese	0.01	0.02
		Mercury	1.53E-04	6.70E-04
		Nickel	0.10	0.50
		Phosphorous	0.02	0.05
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-51	Digesters and Blow Tank	Acetone	0.20	0.50
		1,1,2-Trichloroethane	0.01	0.04
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		Acetaldehyde	0.10	0.36
		Acrolein	4.03E-03	1.53E-02
		Benzene	0.01	0.01
		Carbon Tetrachloride	0.05	0.16
		Chloroform	0.44	1.65
		Formaldehyde	0.01	0.03
		Hexane	0.01	0.02
		Methanol	1.71	6.48

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Methyl Isobutyl Ketone	0.01	0.02
		Styrene	0.02	0.05
		Toluene	0.02	0.04
		Xylene	0.02	0.05
SN-22, 23, and 44	The Pulping Area	Acetone	4.2	14.2
		1,2,4-Trichlorobenzene	0.01	0.03
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		1,1,2-Trichloroethane	0.01	0.03
		Acetaldehyde	1.51	5.10
		Acetophenone	1.08	3.66
		Acrolein	2.82E-02	9.61E-02
		Benzene	0.01	0.01
		Biphenyl	0.02	0.04
		Carbon Disulfide	0.07	0.21
		Carbon Tetrachloride	0.01	0.03
		Carbonyl Sulfide	0.2	0.6
		Chloroform	0.10	0.17
		Chloromethane	0.10	0.10
		Cresol	3.70	12.6
		Cumene	0.20	0.70
		Formaldehyde	0.20	0.60
		Hexane	0.02	0.04
		Hexachloroethane	2.20	7.50
		Methanol	67.6	230.2
		Methyl Isobutyl Ketone	0.11	0.35
		Methylene Chloride	0.04	0.14
		Naphthalene	0.40	1.20
		Phenol	0.66	2.35
		Propionaldehyde	0.07	0.21
		Styrene	0.10	0.10
		Toluene	0.03	0.08
		Vinyl Chloride	0.06	0.18
		Xylene	0.10	0.20
SN-52	Groundwood Mill	Acetaldehyde	0.25	0.73
		Acrolein	1.73E-01	5.03E-01
		Benzene	0.01	0.01
		Biphenyl	0.01	0.03
		1,3-Butadiene	0.01	0.01
		Carbon disulfide	0.03	0.07

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Carbon Tetrachloride	0.01	0.01
		Chloroform	0.08	0.23
		Cumene	0.11	0.32
		1,2-Dichloroethane	0.01	0.01
		Hexane	0.01	0.01
		Formaldehyde	0.04	0.10
		Methanol	0.55	1.59
		Methyl Isobutyl Ketone	0.19	0.53
		Methylene Chloride	0.01	0.03
		Naphthalene	0.05	0.13
		Phenol	0.31	0.90
		Propionaldehyde	0.16	0.46
		Styrene	0.01	0.01
		Toluene	0.04	0.10
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.04	0.09
		Xylene	0.01	0.01
SN-24, 25, 26, 27, 45, 46, and 47	Bleach Plant	Chlorine	0.94	3.39
		Chlorine Dioxide	0.26	1.10
		Acetone	0.1	0.2
		1,1,2-Trichloroethane	0.08	0.30
		1,2,4-Trichlorobenzene	0.18	0.71
		1,2-Dichloroethane	0.08	0.27
		1,3-Butadiene	0.01	0.02
		Acetaldehyde	0.45	1.78
		Acetophenone	0.01	0.01
		Acrolein	5.37E-03	1.94E-02
		Acrylonitrile	0.01	0.03
		Benzene	0.02	0.06
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.01	0.04
		Carbon Tetrachloride	0.24	0.86
		Chloroform	0.40	1.55
		Cresol	0.60	2.15
		Cumene	0.02	0.07
		Formaldehyde	0.06	0.20
		Hexachloroethane	2.16	7.76
		Hexane	0.01	0.01
		Iodomethane	0.01	0.01
		Methylene Chloride	0.16	0.63

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Methanol	5.04	20.0
		Methyl isobutyl ketone	0.10	0.43
		Naphthalene	0.01	0.01
		Phenol	0.34	1.20
		Propionaldehyde	0.04	0.12
		Styrene	0.06	0.22
		Toluene	0.02	0.05
		Xylene	0.05	0.18
SN-55	Methanol Tank	Methanol	8.5	0.5
SN-53	No. 1 Paper Machine	Acetone	0.3	1.2
		1,2,4-Trichlorobenzene	0.29	1.14
		1,1,2-Trichloroethane	0.03	0.11
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.79	3.14
		Acrolein	3.69E-02	1.48E-01
		Benzene	0.02	0.07
		Biphenyl	0.06	0.21
		Carbon Disulfide	0.02	0.07
		Carbon Tetrachloride	0.12	0.47
		Chloroform	0.10	0.37
		Cumene	0.01	0.04
		Formaldehyde	0.16	0.61
		Hexane	0.01	0.03
		Methanol	1.70	6.74
		Methyl Isobutyl Ketone	0.05	0.19
		Methylene Chloride	0.05	0.18
		Naphthalene	0.01	0.04
		Phenol	0.18	0.70
		Propionaldehyde	0.18	0.71
		Styrene	0.07	0.28
		Toluene	0.01	0.02
		Xylene	0.06	0.22
SN-54	No. 2 Paper Machine	Acetone	0.9	3.2
		1,2,4-Trichlorobenzene	0.89	3.18
		1,1,2-Trichloroethane	0.09	0.30
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	2.45	8.74
		Acrolein	1.15E-02	4.11E-01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Benzene	0.05	0.17
		Biphenyl	0.17	0.59
		Carbon Disulfide	0.06	0.20
		Carbon Tetrachloride	0.37	1.30
		Chloroform	0.29	1.01
		Cumene	0.03	0.10
		Formaldehyde	0.48	1.70
		Hexane	0.02	0.06
		Methanol	5.27	18.8
		Methyl Isobutyl Ketone	0.15	0.53
		Methylene Chloride	0.15	0.51
		Naphthalene	0.04	0.12
		Phenol	0.55	1.95
		Propionaldehyde	0.56	1.97
		Styrene	0.22	0.77
		Toluene	0.02	0.05
		Xylene	0.18	0.61
SN-28 through SN-40	No. 6 through No. 9 Extruders	Benzene	0.01	0.01
		Formaldehyde	0.01	0.01
		Hexane	0.05	0.19
		Naphthalene	0.01	0.01
		Toluene	0.01	0.01
		Arsenic	4.62E-06	2.03E-05
		Cadmium	2.55E-05	1.12E-04
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	6.01E-06	2.64E-05
		Nickel	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-41 and SN-42	Off Machine Coaters	Benzene	0.01	0.01
		Formaldehyde	0.01	0.02
		Hexane	0.11	0.45
		Naphthalene	0.01	0.01
		Toluene	0.01	0.01
		Arsenic	1.14E-05	4.99E-05
		Cadmium	6.26E-05	2.74E-04
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	1.48E-05	6.48E-05
		Nickel	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Polycyclic Organic Matter	0.01	0.01
SN-02	No. 2 Recovery Boiler	Acetone	0.7	2.7
		1,1,2-Trichloroethane	0.05	0.21
		1,2,4-Trichlorobenzene	0.02	0.09
		1,2-Dichloroethane	0.01	0.04
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.65	2.83
		Acetophenone	0.41	1.79
		Acrolein	1.25E-02	5.47E-02
		Acrylonitrile	0.01	0.01
		Benzene	0.12	0.49
		Biphenyl	0.01	0.03
		Carbon disulfide	0.03	0.11
		Carbon Tetrachloride	0.01	0.01
		Carbonyl sulfide	0.82	3.57
		Chlorine	0.05	0.20
		Chloroform	0.01	0.04
		Chloromethane	1.74	7.62
		Cumene	0.01	0.01
		Cresol	0.95	4.16
		Formaldehyde	0.26	1.13
		Hexachloroethane	0.94	4.09
		Hexane	0.71	5.89[1]
		Iodomethane	0.03	0.09
		Methanol	6.45	28.3
		Methyl Isobutyl Ketone	0.02	0.06
		Methylene Chloride	0.06	0.25
		Naphthalene	0.14	0.60
		Phenol	0.49	2.14
		Propionaldehyde	0.01	0.01
		Styrene	0.02	0.08
		Toluene	0.03	0.11
		Xylene	0.02	0.08
		Arsenic	0.01	0.01
		Beryllium	2.04E-05	8.91E-05
		Cadmium	0.01	0.01
		Cobalt	0.01	0.02
		Manganese	0.01	0.01
		Mercury	1.02E-04	8.51E-04
		Nickel	0.05	0.22

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Phosphorus	0.01	0.03
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-03	No. 3 Recovery Boiler	Acetone	0.7	2.7
		1,1,2-Trichloroethane	0.05	0.21
		1,2,4-Trichlorobenzene	0.02	0.09
		1,2-Dichloroethane	0.01	0.04
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.65	2.83
		Acetophenone	0.41	1.79
		Acrolein	1.25E-02	5.47E-02
		Acrylonitrile	0.01	0.01
		Benzene	0.12	0.49
		Biphenyl	0.01	0.03
		Carbon Disulfide	0.03	0.11
		Carbon Tetrachloride	0.01	0.01
		Carbonyl Sulfide	0.82	3.57
		Chlorine	0.05	0.20
		Chloroform	0.01	0.04
		Chloromethane	1.74	7.62
		Cumene	0.01	0.01
		Cresol	0.95	4.16
		Formaldehyde	0.26	1.13
		Hexachloroethane	1.00	4.09
		Hexane	0.71	5.89[1]
		Iodomethane	0.03	0.09
		Methanol	6.45	28.22
		Methyl Isobutyl Ketone	0.02	0.06
		Methylene Chloride	0.06	0.25
		Naphthalene	0.14	0.60
		Phenol	0.49	2.14
		Propionaldehyde	0.01	0.01
		Styrene	0.02	0.08
		Toluene	0.03	0.11
		Xylene	0.02	0.08
		Arsenic	0.01	0.01
		Beryllium	2.04E-05	8.91E-05
		Cadmium	0.01	0.01
		Cobalt	0.01	0.02
		Manganese	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Mercury	1.02E-04	8.51E-04
		Nickel	0.05	0.22
		Phosphorus	0.01	0.03
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-04	No. 4 Recovery Boiler	Acetone	1.7	7.3
		1,1,2-Trichloroethane	0.13	0.57
		1,2,4-Trichlorobenzene	0.06	0.25
		1,2-Dichloroethane	0.03	0.10
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	1.75	7.66
		Acetophenone	1.11	4.84
		Acrolein	3.39E-02	1.49E-01
		Acrylonitrile	0.01	0.01
		Benzene	0.31	1.33
		Biphenyl	0.02	0.08
		Carbon Disulfide	0.07	0.29
		Carbon Tetrachloride	0.01	0.02
		Carbonyl Sulfide	2.21	9.67
		Chlorine	0.12	0.53
		Chloroform	0.02	0.09
		Chloromethane	4.72	20.7
		Cresol	2.58	11.28
		Cumene	0.01	0.01
		Formaldehyde	0.70	3.05
		Hexachloroethane	2.53	11.1
		Hexane	1.92	5.89[1]
		Iodomethane	0.06	0.25
		Methanol	17.5	76.6
		Methyl Isobutyl Ketone	0.04	0.15
		Methylene Chloride	0.16	0.67
		Naphthalene	0.37	1.62
		Phenol	1.33	5.80
		Propionaldehyde	0.01	0.01
		Styrene	0.05	0.21
		Toluene	0.07	0.30
		Xylene	0.05	0.22
		Arsenic	0.01	0.02
		Beryllium	5.52E-05	2.42E-04
		Cadmium	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Cobalt	0.02	0.05
		Manganese	0.01	0.03
		Mercury	2.77E-04	9.30E-04
		Nickel	0.16	0.70
		Phosphorus	0.02	0.08
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-06	No. 2 Smelt Dissolving Tank	Acetone	0.1	0.3
		Ammonia	4.1	17.8
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.04	0.17
		Acetophenone	0.04	0.15
		Acrolein	7.67E-03	3.36E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.03
		Carbonyl Sulfide	0.01	0.04
		Chlorine	0.07	0.29
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.02
		Cresol	0.12	0.46
		Cumene	0.01	0.03
		Formaldehyde	0.12	0.52
		Hexachlorocyclopentadiene	0.10	0.41
		Hexachloroethane	0.07	0.29
		Hexane	0.01	0.01
		Methanol	0.38	1.64
		Methyl Isobutyl Ketone	0.01	0.03
		Methylene Chloride	0.01	0.01
		Naphthalene	0.02	0.08
		Phenol	0.03	0.12
		Propionaldehyde	0.03	0.10
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		Arsenic	3.19E-05	1.40E-04

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Beryllium	3.77E-06	1.65E-05
		Cadmium	1.77E-05	7.73E-05
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	5.16E-06	2.26E-05
		Nickel	0.01	0.01
		Phosphorus	0.01	0.01
		Selenium	0.01	0.01
SN-07	No. 3 Smelt Dissolving Tank	Acetone	0.1	0.3
		Ammonia	4.1	17.8
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.04	0.17
		Acetophenone	0.04	0.15
		Acrolein	7.67E-03	3.36E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.03
		Carbonyl Sulfide	0.01	0.04
		Chlorine	0.07	0.29
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.02
		Cresol	0.12	0.46
		Cumene	0.01	0.03
		Formaldehyde	0.12	0.52
		Hexachlorocyclopentadiene	0.10	0.41
		Hexachloroethane	0.07	0.29
		Hexane	0.01	0.01
		Methanol	0.38	1.64
		Methyl Isobutyl Ketone	0.01	0.03
		Methylene Chloride	0.01	0.01
		Naphthalene	0.02	0.08
		Phenol	0.03	0.12
		Propionaldehyde	0.03	0.10
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Xylene	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Arsenic	3.19E-05	1.40E-04
		Beryllium	3.77E-06	1.65E-05
		Cadmium	1.77E-05	7.73E-05
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	5.16E-06	2.26E-05
		Nickel	0.01	0.01
		Phosphorus	0.01	0.01
		Selenium	0.01	0.01
SN-08	No. 4 Smelt Dissolving Tank	Acetone	0.2	0.6
		Ammonia	11.1	48.4
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.02
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.11	0.45
		Acetophenone	0.09	0.39
		Acrolein	2.08E-02	9.11E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.02
		Carbon Disulfide	0.01	0.02
		Carbon Tetrachloride	0.02	0.08
		Carbonyl Sulfide	0.03	0.10
		Chlorine	0.18	0.77
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.05
		Cresol	0.28	1.23
		Cumene	0.02	0.06
		Formaldehyde	0.33	1.41
		Hexachlorocyclopentadiene	0.26	1.10
		Hexachloroethane	0.18	0.77
		Hexane	0.01	0.02
		Methanol	1.02	4.43
		Methyl Isobutyl Ketone	0.02	0.08
		Methylene Chloride	0.01	0.02
		Naphthalene	0.05	0.21
		Phenol	0.07	0.31
		Propionaldehyde	0.06	0.26
		Styrene	0.02	0.05
		Toluene	0.01	0.02

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Xylene	0.01	0.02
		Arsenic	8.66E-05	3.79E-04
		Beryllium	1.03E-05	4.47E-05
		Cadmium	4.79E-05	2.10E-04
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	1.40E-05	6.13E-05
		Nickel	0.01	0.01
		Phosphorus	0.01	0.01
		Selenium	0.01	0.01
SN-21	Black Liquor Oxidation Tank	Acetone	2.6	11.2
		1,1,2-Trichloroethane	0.01	0.04
		1,2,4-Trichlorobenzene	0.07	0.28
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	5.53	24.3
		Acetophenone	0.08	0.32
		Acrolein	0.01	0.03
		Benzene	0.01	0.03
		Carbon Disulfide	0.41	1.77
		Carbon Tetrachloride	0.06	0.23
		Carbonyl Sulfide	0.44	1.89
		Chloromethane	0.08	0.35
		Chloroform	0.01	0.01
		Cresol	0.12	0.49
		Cumene	0.24	1.05
		Formaldehyde	0.12	0.52
		Hexachloroethane	0.48	2.10
		Hexane	0.02	0.09
		Methanol	40.0	175.0
		Methyl Isobutyl Ketone	0.08	0.35
		Methylene Chloride	0.05	0.22
		Naphthalene	0.66	2.87
		Phenol	0.10	0.42
		Propionaldehyde	0.28	1.19
		Styrene	0.01	0.03
		Toluene	0.10	0.42
		Xylene	0.13	0.57
SN-58	Process Liquor Tanks	Acetone	0.8	3.2
		1,1,2-Trichloroethane	0.01	0.02

EMISSION SUMMARY

Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.02
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.32	1.37
		Acetophenone	0.07	0.29
		Acrolein	3.11E-03	1.37E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.21	0.92
		Carbon Tetrachloride	0.01	0.01
		Carbonyl Sulfide	0.11	0.48
		Chloroform	0.14	0.59
		Cresol	0.08	0.31
		Cumene	0.02	0.07
		Formaldehyde	0.02	0.05
		Hexane	0.01	0.01
		Methanol	4.70	20.2
		Methyl Isobutyl Ketone	0.02	0.08
		Methylene Chloride	0.01	0.02
		Naphthalene	0.01	0.01
		Phenol	0.31	1.35
		Propionaldehyde	0.06	0.23
		Styrene	0.01	0.02
		Toluene	0.02	0.08
		Xylene	0.01	0.01
SN-09	No. 1 Lime Kiln	Acetone	3.8	16.8[2]
		1,1,2-Trichloroethane	0.01	0.02
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.07	0.27
		Acetophenone	0.06	0.23
		Acrolein	5.16E-03	2.26E-02
		Benzene	0.01	0.04
		Biphenyl	0.01	0.02
		Carbon Disulfide	0.01	0.02
		Carbon Tetrachloride	0.02	0.07
		Carbonyl Sulfide	0.04	0.17
		Chlorine	0.08	0.32
		Chloroform	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Chloromethane	0.02	0.08
		Cresol	0.14	0.59
		Cumene	0.02	0.07
		Formaldehyde	0.08	0.32
		Hexachloroethane	0.10	0.42
		Hexane	0.13	0.55
		Hydrochloric Acid	0.02	0.08
		Iodomethane	0.01	0.01
		Methanol	4.57	20.0[2]
		Methyl Isobutyl Ketone	0.01	0.02
		Methylene Chloride	0.01	0.01
		Naphthalene	0.13	0.54
		Phenol	0.09	0.37
		Propionaldehyde	0.05	0.21
		Styrene	0.01	0.01
		Toluene	0.01	0.04
		Xylene	0.01	0.04
		Arsenic	6.43E-04	2.82E-03
		Beryllium	3.25E-04	3.13E-04
		Cadmium	2.41E-04	1.06E-03
		Cobalt	0.01	0.02
		Manganese	0.01	0.03
		Mercury	3.07E-04	3.98E-04
		Nickel	0.05	0.18
		Phosphorus	0.04	0.14
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-10	No. 2 Lime Kiln	Acetone	3.8	16.8[2]
		1,1,2-Trichloroethane	0.01	0.02
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.07	0.27
		Acetophenone	0.06	0.23
		Acrolein	5.16E-03	2.26E-02
		Benzene	0.01	0.04
		Biphenyl	0.01	0.02
		Carbon Disulfide	0.01	0.02
		Carbon Tetrachloride	0.02	0.07
		Carbonyl Sulfide	0.04	0.17

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Chlorine	0.08	0.32
		Chloroform	0.01	0.01
		Chloromethane	0.02	0.08
		Cresol	0.14	0.59
		Cumene	0.02	0.07
		Formaldehyde	0.08	0.32
		Hexachloroethane	0.10	0.42
		Hexane	0.13	0.55
		Hydrochloric Acid	0.02	0.08
		Iodomethane	0.01	0.01
		Methanol	4.57	20.0[2]
		Methyl Isobutyl Ketone	0.01	0.02
		Methylene Chloride	0.01	0.01
		Naphthalene	0.13	0.54
		Phenol	0.09	0.37
		Propionaldehyde	0.05	0.21
		Styrene	0.01	0.01
		Toluene	0.01	0.04
		Xylene	0.01	0.04
		Arsenic	6.43E-04	2.82E-03
		Beryllium	3.25E-04	3.13E-04
		Cadmium	2.41E-04	1.06E-03
		Cobalt	0.01	0.02
		Manganese	0.01	0.03
		Mercury	3.07E-04	3.98E-04
		Nickel	0.05	0.18
		Phosphorus	0.04	0.14
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-11	Slaker	Acetone	0.3	1.0
		Ammonia	12.6	55.4
		1,2-Dichloroethane	0.01	0.01
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.50	2.16
		Acrolein	1.19E-03	5.19E-03
		Benzene	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.04

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Chloroform	0.01	0.03
		Cumene	0.01	0.01
		Formaldehyde	0.02	0.06
		Hexane	0.01	0.01
		Methanol	2.35	10.3
		Methyl Isobutyl Ketone	0.01	0.01
		Methylene Chloride	0.12	0.53
		Naphthalene	0.01	0.01
		Phenol	0.03	0.11
		Propionaldehyde	0.01	0.03
		Styrene	0.01	0.01
		Toluene	0.01	0.02
		Xylene	0.01	0.01
SN-48 and SN-59	The Caustic Area	Acetone	0.2	0.6
		1,2-Dichloroethane	0.01	0.01
		1,2-Dichloroethylene	0.01	2.05E-02
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		Acetaldehyde	0.05	1.95E-01
		Acrolein	3.73E-03	1.63E-02
		Benzene	0.01	0.01
		Carbon Tetrachloride	0.02	0.07
		Chloroform	0.02	0.05
		Formaldehyde	0.01	0.03
		Methanol	4.01	17.6
		Methylene Chloride	0.01	0.03
		Methyl Isobutyl Ketone	0.01	0.01
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Xylene	0.01	0.03
SN-49	Condensate Collection and Treatment	Acetone	5.2	14.2
		Acetaldehyde	5.26	17.8
		Acrolein	6.73E-02	1.87E-01
		Benzene	0.01	0.03
		Carbon Disulfide	0.30	0.81
		Chloroform	1.13	3.12
		Cresol	0.01	0.01
		Chloromethane	0.01	0.01
		Formaldehyde	0.05	0.14
		Methanol	484	1,331

EMISSION SUMMARY

Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Methyl Isobutyl Ketone	0.04	0.11
		Methylene Chloride	0.04	0.09
		Naphthalene	0.09	0.24
		Pentachlorophenol	0.54	1.48
		Phenol	0.01	0.01
		Propionaldehyde	1.45	3.98
		Toluene	0.03	0.08
		2,4,5-Trichlorophenol	0.12	0.32
SN-57	Landfill	Acetone	0.1	0.1
		1,1,2,2-Tetrachloroethane	0.01	0.04
		1,2-Dichloroethane	0.01	0.01
		Acrylonitrile	0.02	0.06
		Benzene	0.01	0.03
		Carbon Disulfide	0.01	0.01
		Carbonyl Sulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.01
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.01
		Hexane	0.03	0.10
		Mercury	2.20E-06	9.64E-06
		Methyl Isobutyl Ketone	0.01	0.04
		Methylene Chloride	0.05	0.21
		Toluene	0.14	0.61
		Vinyl Chloride	0.02	0.08
		Xylene	0.05	0.22
SN-113	AKD Sizing Plant	Propylene Dichloride	0.09	0.41
SN-114	No. 1 Kiln Auxiliary Drive (48 hp diesel fired engine)	Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-115	No. 2 Kiln Auxiliary Drive (100 hp diesel fired engine)	Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.01 0.01 0.01 0.01	0.01 0.01 0.01 0.01
SN-116	Mud Storage Rake Auxiliary Drive (37 hp gasoline-fired engine)	Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
SN-117	No. 1 Emergency Clarifier Pump (425 hp diesel-fired engine)	Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
SN-118	No. 2 Emergency Clarifier Pump (425 hp diesel-fired engine)	Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
SN-119	Emergency Fire Pump (340 hp diesel-fired engine)	Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-120	Water Pump Engine (82 hp diesel-fired engine)	Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-121	Water Plant Emergency Boiler Water Engine (290 hp)	Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
SN-122	Reservoir Emergency Boiler Water Engine (Inside Water Plant) (128 hp)	Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01

* HAPs included in the VOC or PM totals. Other HAPs are not included in any other totals unless specifically stated.

** Air Contaminants such as Ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

[1] Total Annual Hexane Emission Limit Across No. 2, No. 3, and No. 4 Recovery Boilers

[2] Total Annual Acetone and Methanol Emission Limits for No. 1 (SN-09) and No. 2 Lime Kiln (SN-10)

SECTION III: PERMIT HISTORY

The Pine Bluff Mill was constructed in 1957 and operation began in 1958. This facility officially registered with the Department in 1969.

Permit **131-A** was issued on September 22, 1972. This was the first air permit issued to the International Paper Company Pine Bluff Mill. A solid waste disposal system, the black liquor oxidation system, an ESP to replace the scrubbers on the No. 2 and No. 3 Recovery Boilers, and a sludge dewatering system were the sources included in this permit application.

The next permit, **231-A**, was issued to International Paper on May 28, 1974, to permit the installation of a package boiler which has since been removed from service and dismantled.

On November 18, 1977, permit **442-A** was issued to International Paper. The existing scrubbers on the No. 2 and No. 3 Lime Kilns were replaced, a venturi scrubber was installed on the No. 1 and No. 2 Slaker vents which were previously uncontrolled and a scrubber was added to the No. 4 Smelt Dissolving Tank.

Permit **580-A** was issued on November 11, 1979, to permit the installation of multiclone dust collectors on the Bark Boiler following an out of compliance determination.

Permit **580-AR-1** was issued on July 26, 1985, following a Consent Administrative Order issued on October 1, 1984.

On July 31, 1986, Permit **580-AR-2** was issued to permit the installation of three scrubbers to control particulate and TRS emissions in connection with the SIP 111d plan.

On February 16, 1987, Permit **580-AR-3** was issued to International Paper to permit the installation of a fugitive dust control system for the lime kiln operations and to permit the installation of a new Slaker with a gas scrubber to replace the two existing Slakers and their respective scrubbers.

Permit **580-AR-4** was issued on November 3, 1987. This permit was issued to meet the final stage of the TRS SIP 111d plan. It permitted ducting the non-condensable gases through a cooler and a scrubber and finally to the lime kilns for incineration.

On January 29, 1990, International Paper was issued permit **580-AR-5**. This permit allowed for the installation of a new ESP on the No. 4 Recovery Boiler to replace the old one. This replacement resulted in a reduction of permitted particulate matter emissions. Specific Condition #3 of Permit 580-AR-5 and operation of the No. 3 Smelt Dissolving Tank scrubber were amended by a letter on April 1, 1991.

Permit **580-AR-6** was issued on May 25, 1993. Under this permit all existing air emission sources were consolidated into one permit.

Permit **580-AR-7** was issued to International Paper on April 25, 1994. This minor modification permitted the installation of an Atmospheric Oxygen Delignification (AOD, SN-47) process at the bleaching operations. This process was never added to the facility and there are currently no plans to do so in the future.

Permit **580-AOP-R0** was the first operating permit for the International Paper Company Pine Bluff Mill under Regulation #26. This was the first permit for the Chip Mill. This permit incorporated sources that were not previously permitted. In addition, some allowable emission rates were modified from the previous permit to reflect more recent test data, newer emission factors and/or alternate fuel firing scenarios.

To resolve certain quality issues surrounding paper produced on the No. 2 Paper Machine, the facility has added a set of natural gas fired infrared dryers with a maximum heat input capacity of 6.33 MMBtu/hr to the dry end of this machine. This new emission source was considered an insignificant activity. No increases in production were associated with this modification.

Permit **580-AOP-R1** incorporated the following changes at the facility:

(1) IP Pine Bluff modified the No. 2 Paper Machine (SN-54). The No. 2 Paper Machine was rebuilt in order to improve the quality of the product being produced by the machine. No change in either the production capacity or the actual production of the No. 2 Paper Machine was seen as a result of this modification. In addition, because no increase in pulp production was necessary to support this modification, production increases were not realized elsewhere in the mill as a result of this modification. Permitted emission levels for the No. 2 Paper Machine were not increased. Because this modification gave the No. 2 Paper Machine the capability to produce more square-footage of paper for the same amount of tons of paper, more resin was required to coat the paper at the No. 2 Paper Machine Extruders (SN-28 thru SN-40). This permit application was intended to reduce the annual permitted VOC emission limit and resin throughput requirements to more realistic maximum values.

(2) IP Pine Bluff removed the 2C Stage Bleach Plant Tower (SN-46) from service and brought the existing 3C Stage Tower (which was not currently in service) back on line to accept the flow previously routed to the 2C Stage Tower. There was no increase in emissions as a result of this shift in in-service process equipment.

(3) IP Pine Bluff proposed to increase the hours of operation of the Emergency NCG Flare (SN-43) from 50 hours per twelve consecutive months to 200 hours per twelve consecutive months.

(4) This permit was being modified to include the necessary equipment and process changes that are essential in satisfying the requirements of the promulgated National Emissions Standards for Hazardous Air Pollutants for the Pulp and Paper Industry (40 CFR Part 63 Subpart S). This regulation is one portion of the integrated regulations commonly referred to as the Cluster Rule. The following sections of the Cluster Rule compliance directive as it applies to air permit requirements were addressed:

MACT I – Foul Condensate Collection
MACT I – Foul Condensate Treatment
MACT I – Low Volume High Concentration (LVHC) Gas Collection
MACT I – Bleaching System Vents Collection & Treatment
Best Management Practices (BMP)

Changes to the permit included the collection of certain foul condensates in three dedicated collection tanks. These condensates were "hard-piped" to the aerated stabilization basin, or ASB, (SN-49) for treatment. The mill collected and destroyed the required LVHC gaseous emissions streams as part of the existing NCG system. As part of this modification, emissions from the three new condensate collection tanks were to be collected and sent to either the No. 1 Lime Kiln (SN-09) or the No. 2 Lime Kiln (SN-10) for treatment. The Emergency NCG Flare (SN-43) continued to be used as a back-up treatment device. The Pine Bluff Mill collected all required bleaching system vents and routed them to the Bleach Plant Scrubber (SN-27). However, this system was included in the permit modification to address appropriate requirements for collection, monitoring, and recordkeeping. The Liquor Tanks source category (SN-58) was also modified to include the addition of the BMP tank that was to be added for the purpose of temporarily storing any spills of spent pulping liquor, soap, and turpentine should they occur. The foul condensate collection tanks installed as a result of these modifications are not considered to be subject to NSPS Subpart Kb.

(5) The Bleach Plant permitted CO emission limits were modified based on recent stack test results. The limit in the original Title V permit was based on a one time stack test conducted in 1993.

(6) The permitted SO_2 emission limits of the Recovery Boilers were modified. The limits in the permit were set based on a one time test and did not accurately reflect the normal operating ranges of these boilers. The revised limits were more appropriately based on the midpoint range of NCASI factors. The Air Division agrees that this is a correction of the SO_2 emission limits.

(7) The annual throughput of the Methanol Tank (SN-55) was increased from 1,000,000 gallons per year to 1,400,212 gallons per year.

(8) The individual softwood and hardwood pulp production limits of the Bleach Plant (SN-24 thru 27, 46, and 47) were combined to a total pulp production limit. The current emission limits are already based on total pulp production.

Permit **580-AOP-R2** was a modification to establish chlorine dioxide limits for the Bleach Plant sources (SN-24 through 27 and SN-45 through 47) as a result of improvements to the Bleach Plant Scrubber. The chlorine limits were increased based on the same modifications and subsequent testing. In addition, the hourly and yearly emission limits for the smelt dissolving tanks were changed to correspond with the permitted TRS concentration limit of 0.0168 g/kg. The hourly and yearly TRS emission limits were increased for the smelt dissolving tanks so that they correspond with the permitted TRS concentration limit.

Permit **580-AOP-R3** consisted of two minor modifications approved on February 21 and March 24, 2003. The first modification involved minor changes to permit language in some specific conditions, plantwide conditions, and general provisions. A majority of the changes resulted from mill-specific Cluster Rule requirements that were adopted since issuance of the previous permit. The second modification allowed IP to use railroad crosstie chips and tire-derived fuel (TDF) chips as supplemental fuel sources in the Bark Boiler (SN-01). In addition IP will be allowed to burn more types of fuel oil (including No. 6, 5, 4, and 2 fuel oil) in the No.1 and No.2 Power Boilers (SN-13 and SN-15), in No.1 and No. 2 Lime Kilns (SN-09 and SN-10), in the Bark Boiler (SN-01), and in No. 2, No.3, and No.4 Recovery Boilers (SN-02 through SN-04). The allowance of the above listed fuel types as supplement or alternative fuels did not increase any permitted criteria pollutant emissions limits; however, the modification did increase permitted emission limits of barium 0.4 tons, copper 2.2 tons, iron 2.5 tons, vanadium 0.1 tons and zinc 234.2 tons, annually.

Permit **580-AOP-R4** was issued on August 6, 2004. This permitting action included a minor modification to the permit which incorporated the PM requirements of 40 CFR Part 63, Subpart MM, a modification which allowed the installation of an overfire air system to the bark boiler, and a third modification which allowed IP to comply with the Clean Condensate Alternative of 40 CFR Part 63, Subpart S (See SN-49). The modifications to the permit did not increase permitted emissions, but annual permitted emissions of carbon monoxide decreased 6,828.6 tons per year as a result of the boiler modification and the use of updated emission factors supplied by the vendor.

Permit **580-AOP-R5** was issued August 23, 2005. This permitting action comprised multiple modifications along with the renewal. The first of which was a minor modification to expand the operations at the Chip Mill (SN-100) by increasing the amount of chips and bark produced on-site, and therefore, reduce the amount purchased by the mill. This expansion resulted in an increased amount of logs processed on-site. However, the amount stored on-site was not affected. Additionally, the proposed system allowed the mill to debark and chip material without cutting the trees into logs; therefore, eliminating all cutting operations at the chip mill with the exception of wood used for groundwood operations. This modification resulted in a decrease in PM/PM_{10} emissions.

The second modification was to incorporate an alternate operating scenario for TRS emissions at the recovery boilers and the Black Liquor Oxidation System (BLOx Unit) as allowed under §19.802 of Regulation 19. The alternate operating scenario is allowed during maintenance of the recovery boiler and the alternate operating scenario places stricter TRS mass limits on the combination of recovery boilers (SN-2 through SN-4). Therefore, there was no permitted emission increase related to this modification.

The third modification was a minor modification that allowed the installation of a dedicated fuel oil tank (insignificant activity) to supply fuel oil to the No.1 and No. 2 Lime Kilns and/or modify the existing fuel distribution system used to supply fuel oil to No. 1 and No. 2 Lime Kilns and Power Boilers. Additionally, this modification allowed a fuel oil with a maximum sulfur content of 3% for combustion in the lime kilns, only. IP ensures that the fuel oil with a sulfur content greater than 1% but less than 3% will only be burned in the lime kilns by either of the following two options. One option was to install a dedicated fuel oil tank that is piped directly and only to the No. 1 and No. 2 Lime Kilns. The second option was to continue to draw the fuel oil from the existing storage tank which currently supplies fuel oil to the power boilers and lime kilns. In the latter case, IP installed an inline sulfur monitor at the inlet to the power boilers. The inline monitor allowed the mill to blend fuel oils with various sulfur contents in the existing tank and continued to assure that the fuel oil delivered to the No. 1 and No. 2 Power Boilers does not exceed 1% sulfur content as limited in the permit. The permitted annual emissions increased 9.5 tons of SO_2.

The final modification was a significant modification to improve overall fiber line operations. The improvement resulted in the ability to produce an increased amount of pulp. The increased pulp production resulted in a net emission increase in excess of PSD significance levels upstream and downstream of the fiber line, on an actual to potential basis. A summary of the PSD modification review is provided below:

BACT Analysis for VOC and TRS from Digester (SN-51)
The RACT/BACT/LAER Clearinghouse was searched for historical and transient control technologies associated with digesters and/or evaporators. Five similar digester installations subject to PSD/BACT were found. The clearinghouse identified BACT, for all listed sources, as incineration. Incineration of non-condensable gases (NCGs) is technically feasible, the most effective control, and is required by 40 CFR Part 63, Subpart S as MACT control for low volume, high concentration (LVHC) gases.

Currently, the digester and evaporator exhausts are routed to the No. 1 or No. 2 Lime Kiln (or to the NCG flare as a backup) for incineration of LVHC gases. The gases are combusted at a temperature of 1200^{o}F for 0.5 seconds in the Lime Kilns to meet both BACT and MACT for control of TRS and VOC emissions. The permitted emissions at the digester source (SN-51) are due to opening, or uncapping, the system during chip loading into each batch digester. These emissions are considered fugitive, and there is no RBLC identified control system for these emissions.

IP's proposed installation of a digester vessel (SN-51) resulted in an actual-to-potential air emission increase that exceeded significant modeling limits. As a result, NAAQS, PSD Increment analysis, Class I Impacts, and Visibility modeling were performed for PM_{10} and SO_2 on a 24-hour basis. The modeled results indicated that within the area of impact radius of the IP Pine Bluff facility, there was no threat to the federal standards. The results showed that none of the federal PSD limits or NAAQS were violated.

As a result of the renewal and multiple modifications (580-AOP-R5), the overall permitted emissions limits were revised. The permitted total annual pollutant emission rates for all criteria pollutants decreased, as well as, the total combined annual HAP emissions. The decreases in emissions were a result of removed sources and the use of more accurate emission factors. However, the annual permitted emission rate increased 18.7 tons for Ammonia.

Permit **580-AOP-R6** was issued November 16, 2006. This permit revision was comprised of a minor modification and a significant modification to the permit. The minor modification allowed IP to install an oxygen injection system to supplement black liquor oxidation at the BLOx Unit (SN-21). This oxygen trim system aids in reducing TRS emissions from the facility. IP determined that the oxygen trim system TRS emissions reductions would be easier to quantify, more reliable, and much more cost effective than the hydrogen peroxide injection system previously permitted. Therefore, the conditions relating to the installation of a hydrogen peroxide injection system were replaced with conditions authorizing the installation of an oxygen trim system. The installation of the oxygen trim system did not increase any permitted emission rates.

The second modification incorporated the requirements of 40 CFR Part 63, Subpart DDDDD (Boiler MACT). The Boiler MACT affected the Bark Boiler (SN-01) conditions and limits listed in the previous permit. (Note: the Boiler MACT has since been rescinded and conditions relating to this modification were removed in the R7 revision of the permit).

As the third modification, the Condensate Collection and Treatment (SN-49) Section of the permit was updated to make the permit consistent with the final equipment design phase of the Clean Condensate Alternative (CCA) implementation at IP Pine Bluff.

Lastly, permit language incorporating the requirements of 40 CFR Part 63, Subpart JJJJ (Web Coating MACT) was included in the plantwide conditions of this permit. The Web Coating MACT affects the No. 6 through No. 9 Extruders (SN-28 through SN-40) and the Off Machine Coaters (SN-41 and SN-42). IP demonstrates compliance with the MACT by maintaining records onsite to document that the HAP content of each as-purchased coating does not exceed 4% by weight.

As a result of the multiple modifications, the overall permitted emissions limits were revised. Overall annual permitted emission rates decreased 541.2 tons of PM/PM_{10} and increased by 2.19 tons of TSM and 0.02 tons of Mercury.

Permit **580-AOP-R7** was issued January 24, 2008. This permit revision was comprised of a minor modification which allowed the facility to burn petroleum coke in the lime kilns. The facility is limited on the amount of petroleum coke that may be burned on an annual basis. As a result of the approved modification, the overall annual permitted emission rate of chromium compounds increased by 0.04 ton.

In July of 2007, the Boiler MACT (NESHAP Subpart DDDDD) was officially rescinded; therefore, all conditions relating to the Boiler MACT were removed from this permit. Due to the removal of TSM limits (2.19 tons per year) and adjusting the speciated metallic HAP limits at SN-01, annual emissions increased at SN-01: 0.1 ton of Lead, 0.05 ton of Chromium, 0.01 ton Beryllium, 1.38 tons of Manganese, and 0.54 ton of Nickel.

Permit# **0580-AOP-R8** was issued December 17, 2008. This permit revision was comprised of two minor modifications, the first of which revised SO_2 emissions from the power boilers. The emissions are now based on a sulfur balance versus AP-42 emission factors. Particulate and sulfur dioxide testing requirements for the power boilers was removed; a one year testing extension was allowed for the No. 2 Power Boiler (due to low utilization) and revisions to the testing requirements for both of the lime kilns were applied to allow these sources flexibility.

The second minor modification allowed the facility to make improvements to the extruders and associated handling system. The improvements to the extruder system allowed for more uniform resin application and reduced the amount of waste generated at the extruders. The improvements didn't have any effect on the amount of uncoated paper produced at #2 Paper Machine. There was a decrease to permitted emissions of VOC resulting from this minor modification because the facility reduced the permitted throughput of resin from 126,000 tons to 90,000 tons of polyresin per year.

As a result of the two minor modifications, overall annual permitted emissions of SO_2 increased 5.6 tons and VOC decreased 19.9 tons while no other emissions changed as a result of these modifications.

Permit #**0580-AOP-R9** was issued on February 24, 2012. The purpose of this revision to the permit was to renew Title V Operating Permit# 0850-AOP-R8 to allow needed equipment modifications at the facility, and to allow revisions to the permit compliance requirements. The changes to the permit included the follow:

1. Revise the PM/PM_{10} stack testing requirements for the Bark Boiler (SN-01), No. 2 Recovery Boiler (SN-02), No. 3 Recovery Boiler (SN-03), No. 4 Recovery Boiler (SN-04), No. 2 Smelt Dissolving Tank (SN-06), No. 3 Smelt Dissolving Tank (SN-07), No. 4 Smelt Dissolving Tank (SN-08), No. 1 Lime Kiln (SN-09), and No. 2 Lime Kiln (SN-10) based on the EPA's and the ADEQ's current regulatory position on condensable PM,
2. Revise to allow the introduction of a low-sulfur (1% or less) petroleum-based additive (e.g., No. 2 Fuel Oil or Diesel) to the black liquor feed stream to the recovery boilers,
3. Update emission limits for the Black Liquor Oxidation (BLOX) Tank based on more recent emissions testing,
4. Update emissions limits for Condensate Collection and Treatment (SN-49) based on results from the Clean Condensate Collection Alternative (CCA) studies and the recently published NCASI Bulletin No. 956,
5. Remove ammonia emission limit and correct the methanol emission limit for the Digesters and Blow Tanks (SN-51),
6. Revise list of process liquor tanks (SN-58) with the addition of another tank and black liquor filters and revise the corresponding emission limits,
7. Add 18 cooling towers as individual permitted sources,
8. Replace one of the five existing waterous grinders in the Ground Mill (SN-52) with a unit consistent with the design and throughput capacity of the current unit,
9. Include rice hulls as biomass fuel at SN-01,
10. Install a moisture profiling steam box and replace the center roll doctor at the No. 1 Paper Machine (SN-53), and

11. Remove the Emergency NCG Flare (SN-43) as a permitted source. Lime Kilns are a recognized control option for NCG/LVHC systems, and 40 CFR 63, Subpart S (commonly referred to as the "Cluster Rule") provides a 1% downtime allowance which can work to avoid the necessity of installing a back-up pollution control system for NCGs/LVHCs.

The changes resulted in a permitted VOC emission increase; however the increase did not trigger PSD. All the changes combined resulted in a permitted emissions increase of 56.3 tpy of PM and 56.2 tpy of PM_{10}, 1729.5 tpy of VOC, 115.9 tpy of CO and 675.42 tpy of TRS, and a decrease of 22.5 tpy of SO_2, 0.5 tpy of NO_x, and 0.003 tpy of Lead.

Permit #**0580-AOP-R10** was issued on January 12, 2015. With this modification, the following changes were incorporated to the permit:

1. Added a ECO Latex Binder Storage Silo as a Group A-13 Insignificant Activity,
2. Replaced the #2 Waterous Grinder at the Groundwood Mill (SN-52),
3. Upgraded the Bleach Plant Scrubber (SN-27) including the installation of a new, scrubber body, inlet transition duct to the scrubber, and inlet duct to the exhaust fans,
4. Rebuilt 1C Bleach Plant washer drum and upgrade the air doctor (SN-26),
5. Replaced the 4C Brown Stock Washer Drum and its associated Air Doctor (SN-23) in the Pulp Area,
6. Corrected the typographical errors in the emission rates in Specific Condition 57 and Specific Condition 169 for 1,2-Dichloroethane and Acetophenone, respectively.
7. Added Liquid Dye Mix Tanks and Outside Media Blasting as Group A-13 Insignificant Activities,
8. Added the No. 1 Kiln Auxiliary Drive (SN-114), No. 2 Kiln Auxiliary Drive (SN-115), Mud Storage Rake Auxiliary Drive (SN-116), No. 1 Emergency Clarifier Pump (SN-117), No. 2 Emergency Clarifier Pump (SN-118), Emergency Fire Pump (SN-119), and Chip Mill Fire Pump (SN-120) as permitted sources and remove them from the Insignificant Activities List. Also, add the existing Water Plant Emergency Boiler Water Engine (SN-121) and the Reservoir Emergency Boiler Water Engine (SN-122) to the permit. These engines are subject to 40 CFR Part 63 Subpart ZZZZ, and the No 1. And No. 2 Kiln Auxiliary Drives (SN-114 and SN-115) are subject to 40 CFR Part 60 Subpart IIII.
9. Corrected typographical errors in Specific Conditions #170 for lead, #187 for lead, #164 for cadmium, and #211 for acetaldehyde, TRS, and 1, 2 Dicholoroethylene,
10. Replaced equipment at the #4 Waterous Grinder at the Groundwood Mill (SN-52), including the grinder frame, finger bar holders, pressure feet, bearing housing, shafts, gates, and cylinders. The parts will be replaced in kind.
11. Performed non-routine maintenance/repair activities on the remaining grinders (i.e., including the #1, #2, #3, and #5 Waterous Grinders) in this source group, as necessary to sustain reliable operations. All repair/maintenance activities must be completed within eighteen months of issuance of permit #0580-AOP-R10.

These changes resulted in a permitted emissions increase of 0.9 tpy of PM/PM_{10}, 0.9 tpy of SO_2, 0.9 tpy of VOC, 1.2 tpy CO and 3.2 tpy of NO_x. Various HAPs increased by less than 0.5 tpy.

Permit **#0580-AOP-R11** was issued on April 20, 2015. With this modification, the facility incorporated a Plantwide Applicability Limitation (PAL) for PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, CO, NOx, TRS, lead, H_2SO_4, fluorides, and CO_2e. The PAL was set at 1,143.8 tpy, 836.1 tpy, 726.1 tpy, 392.4 tpy, 1,913.4 tpy, 2,041.1 tpy, 1,458.1 tpy, 833.4 tpy, 0.690 tpy, 17.07 tpy, 3.016 tpy, and 1,969,346.7 tpy for PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, CO, NOx, TRS, lead, H_2SO_4, fluorides, and CO_2e respectively.

Permit **#0580-AOP-R12** was issued on December 31, 2015. With this minor modification, the facility reclassified SN-120, the 82 hp diesel fired engine associated with the emergency use water pump, from an emergency engine to a non-emergency engine. SN-120 was classified as an existing non-emergency, non-black start CI stationary RICE under 40 CFR Part 63, Subpart ZZZZ. There were no changes in emissions.

Permit **#0580-AOP-R13** was issued on April 29, 2016. With this modification, the facility incorporated the provisions of 40 CFR Part 63, Subpart DDDDD (Boiler MACT) into the permit. The boilers subject to this subpart were: Bark Boiler (SN-01), No. 1 Power Boiler (SN-13), and No. 2 Power Boiler (SN-15). The Recovery Boilers No. 1 (SN-02), No. 2 (SN-03), and No. 3 (SN-04) were not subject to the boiler MACT because they were subject to 40 CFR Part 63, Subpart MM. There were no changes in emissions.

SECTION IV: SPECIFIC CONDITIONS

SN-01 - Bark Boiler

Source Description

The Power Operations at Evergreen provide steam for mill production processes and power generation. The Bark Boiler is a part of the Power Operations. The Bark Boiler is a 500 MMBtu/hr boiler that is equipped with a wet venturi scrubber which uses water as the scrubbing medium. The Bark Boiler typically fires bark, dried sludge pellets and natural gas. Additional fuels that may be fired in the Bark Boiler include fuel oil (including No. 6, No. 5, No. 4 and No. 2), used oil, knots, tire-derived fuel (TDF), sawdust, polyscrap, paper scrap, wood waste, and rice hulls.

The No. 1 Recovery Boiler, which was associated with the original mill, was converted into the Bark Boiler in 1968. In 1989, a venturi scrubber and larger fans were added to the boiler. These modifications did not result in an increase in emissions. The Bark Boiler is not currently subject to regulation under NSPS Subpart D or Subpart Db, but it is subject to NESHAP Subpart DDDDD (Boiler MACT), where it is classified as a hybrid suspension grate boiler designed to burn biomass/bio-based solids.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #5 through #15 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	Bark Boiler	PM_{10} SO_2 NO_X CO VOC Lead	96.8 46.0 137.3 288.4 16.9 0.022	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

2. The permittee shall not cause to be discharged to the atmosphere from the Bark Boiler gases which exhibit opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Continuing compliance with this specific condition shall be demonstrated by compliance with Specific Condition #3. [Regulation 19, §19.503 and 40 CFR Part 52 Subpart E]

3. The scrubber shall be kept in good working condition at all times and shall meet the conditions shown in the following table. The scrubber liquor flow rate and the gas pressure drop across the unit shall be measured daily. The results shall be kept on site and be available to Department personnel upon request. [Regulation 19, §19.303, 40 CFR Part 64 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Control Equipment	Parameter	Units	Minimum Operating Limits
01	scrubber	liquor (water) flow rate	gal/min	> 2000
		gas pressure drop across unit	In. H_2O	4.5

4. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #5 through #15 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Bark Boiler	PM	96.8	1143.8*
		TRS	0.13	833.4*
		Acetone	0.09	0.36
		1,1,2-Trichloroethane	0.06	0.27
		1,2,4-Trichlorobenzene	0.03	0.12
		1,2-Dichloroethane	0.02	0.07
		2,4-Dinitrotoluene	0.01	0.01
		Acetaldehyde	0.1	0.42
		Acrolein	0.02	0.17
		Benzene	0.14	0.59
		Carbon Disulfide	0.07	0.29
		Carbon Tetrachloride	0.01	0.03
		Chloroform	0.02	0.08
		Chloromethane	0.02	0.05
		Cumene	0.01	0.04
		Formaldehyde	0.44	1.92
		Hexachlorobenzene	5.10E-04	2.24E-03
		Hexane	0.89	3.87
		Methanol	0.43	1.9
		Methyl Isobutyl Ketone	0.28	1.2
		Methylene Chloride	0.18	0.76
		Naphthalene	0.05	0.22
		Pentachlorophenol	2.22E-05	9.74E-05
		Phenol	0.01	0.05
		Propionaldehyde	0.02	0.07
		Styrene	0.04	0.14

SN	Description	Pollutant	lb/hr	tpy
		Toluene	0.02	0.06
		Vinyl Chloride	0.01	0.04
		Xylene	0.02	0.05
		Arsenic	0.01	0.01
		Beryllium	8.11E-06	3.66E-05
		Cadmium	0.01	0.01
		Cobalt	1.76E-03	7.71E-03
		Manganese	0.34	1.47
		Mercury	1.28E-04	5.59E-04
		Nickel	0.15	0.65
		Phosphorus	0.05	0.22
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.02	0.07

* Plantwide Applicability Limitation

5. Bark, sludge, natural gas, fuel oil (including No. 6, 5, 4, and 2), used oil, knots, sawdust, tire-derived fuel (TDF), polyscrap, paper scrap, wood waste and rice hulls are the only fuels that may be used in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

6. The permittee shall not burn in excess of 482,700 tons of bark per twelve consecutive months in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

7. The permittee shall not burn in excess of 257,544 tons of sludge per twelve consecutive months in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

8. The permittee shall not burn in excess of 291.5 gallons of fuel oil per hour (demonstrated by dividing the daily fuel oil usage by 24 hours) or 2.56 million gallons of fuel oil per twelve consecutive months in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

9. The permittee shall not burn in excess of 4.6 gallons of used oil per hour (demonstrated by dividing the daily used oil usage by 24 hours) or 40,150 gallons of used oil per twelve consecutive months in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

10. The permittee shall not burn in excess of 4,380 tons of tire derived fuel per twelve consecutive months in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

11. The permittee shall not burn in excess of 65,000 tons of rice hulls per twelve consecutive months in the Bark Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

12. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #5 through #11. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each month's individual data for the annual fuel usage limits listed in Specific Conditions #6 through #11 shall by submitted in accordance General Provision #7. The types of fuel combusted and the highest hourly fuel oil and used oil usage during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

13. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

14. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall be verified by testing or by vendors' guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

15. The permittee shall test emissions for the listed pollutants from the Bark Boiler once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202

Pollutant	EPA Reference Test Method
NOx	7E
CO	10
SO_2	6C
VOC	25A
TRS	16
CO_2e	EPA approved method

16. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the Bark Boiler, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

SN-13 - No. 1 Power Boiler

Source Description

The Power Operations at Evergreen provide steam for mill production processes and power generation. The No. 1 Power Boiler is a part of the Power Operations. The No. 1 Power Boiler is a 600 million Btu per hour boiler. The boiler has two stacks and is not equipped with any pollution control devices. The No. 1 Power Boiler is capable of firing natural gas and fuel oil (including No. 6, 5, 4, and 2).

The No. 1 Power Boiler was installed in 1958 and has not been modified. Consequently, the No. 1 Power Boiler is not subject to regulation under NSPS Subpart D or Subpart Db, but it is subject to NESHAP Subpart DDDDD (Boiler MACT), under which it is classified as a unit designed to burn gas 1.

Specific Conditions

17. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #21 through #26 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
13	No. 1 Power Boiler	PM_{10} SO_2 NO_X CO VOC Lead	13.5 170.6 337.7 49.4 3.3 0.002	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

18. The permittee shall not cause to be discharged to the atmosphere from the No. 1 Power Boiler gases which exhibit opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #19. [Regulation 19, §19.503 and 40 CFR Part 52 Subpart E]

19. Daily observations of the opacity from SN-13 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9 only when fuel oil (including No. 6, 5, 4, and 2) is combusted. Observations are not required in cases when natural gas is the only fuel combusted. If emissions which appear to be in excess of the permitted level are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, which may include shutting down and restarting the unit, the permittee shall conduct another observation of

the opacity from this source. If the opacity observed does not appear to be in excess of the permitted level, then no further action is needed, and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of the permitted level are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than the permitted level. If the opacity observed is not in excess of the permitted level, then no further action is needed, and the permittee will be considered in compliance with the permitted opacity limit. If no Method 9 reading is conducted despite emissions appearing to be in excess of the permitted level after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit for that day. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request.

a. The date and time of the observation.
b. If visible emissions which appeared to be above the permitted limit were detected.
c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
d. The name of the person conducting the opacity observations.

20. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #21 through #26 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
13	No. 1 Power Boiler	PM	13.5	1143.8*
		Benzene	0.01	0.01
		Formaldehyde	0.05	0.20
		Hexane	1.06	4.64
		Naphthalene	0.01	0.01
		Toluene	0.01	0.03
		Xylene	0.01	0.01
		Arsenic	0.01	0.01
		Beryllium	3.02E-05	1.33E-4
		Cadmium	6.48E-04	2.84E-03
		Cobalt	0.01	0.03
		Manganese	0.01	0.02
		Mercury	1.53E-04	6.70E-04
		Nickel	0.10	0.50

SN	Description	Pollutant	lb/hr	tpy
		Phosphorous Selenium Polycyclic Organic Matter	0.02 0.01 0.01	0.05 0.01 0.01

* Plantwide Applicability Limitation

21. The permittee shall use natural gas and fuel oil (including No. 6, 5, 4, and 2) as fuel in the No. 1 Power Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

22. The permittee shall not burn in excess of 1,083 gallons of fuel oil (including No. 6, 5, 4, and 2) per hour (demonstrated by dividing the daily fuel oil usage by 24 hours) or 9.5 million gallons of fuel oil per twelve consecutive months in the No. 1 Power Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

23. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #21 and #22. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each month’s individual data for the annual fuel oil usage limit shall be submitted in accordance with General Provision #7. The types of fuel combusted and highest hourly fuel oil usage during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

24. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

25. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall be verified by testing or by vendors’ guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

26. While firing natural gas, the permittee shall test emissions for the listed pollutants from the No. 1 Power Boiler once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The permittee shall test each of the No. 1 Power Boiler stacks (stacks A and B). The runs for stack A shall be averaged together. The runs for stack B shall be

averaged together. The average run for stack A shall be added to the average run for stack B. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

27. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 1 Power Boiler, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

SN-15 - No. 2 Power Boiler

Source Description

The Power Operations at Evergreen provide steam for mill production processes and power generation. The No. 2 Power Boiler is a part of the Power Operations. The No. 2 Power Boiler is a 600 million Btu per hour boiler. The boiler has two stacks and is not equipped with any pollution control devices. The No. 2 Power Boiler is capable of firing natural gas and fuel oil (including No.6, 5, 4, and 2).

The No. 2 Power Boiler was installed in 1958 and has not been modified. Consequently, the No. 2 Power Boiler is not subject to regulation under NSPS Subpart D or Subpart Db, but it is subject to NESHAP Subpart DDDDD (Boiler MACT), under which it is classified as a limited use boiler.

Specific Conditions

28. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #32 through #37 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-15	No. 2 Power Boiler	PM_{10}	13.5	836.1*
		SO_2	170.6	392.4*
		NO_X	337.7	1458.1*
		CO	49.4	2041.1*
		VOC	3.3	1913.4*
		Lead	0.002	0.69*

* Plantwide Applicability Limitation

29. The permittee shall not cause to be discharged to the atmosphere from the No. 2 Power Boiler gases which exhibit opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #30. [Regulation 19, §19.503 and 40 CFR Part 52 Subpart E]

30. Daily observations of the opacity from SN-15 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9 only when fuel oil (including No. 6, 5, 4, and 2) is combusted. Observations are not required in cases when natural gas is the only fuel combusted. If emissions which appear to be in excess of the permitted level are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, which may include shutting down and restarting the unit, the permittee shall conduct another observation of

the opacity from this source. If the opacity observed does not appear to be in excess of the permitted level, then no further action is needed, and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of the permitted level are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than the permitted level. If the opacity observed is not in excess of the permitted level, then no further action is needed, and the permittee will be considered in compliance with the permitted opacity limit. If no Method 9 reading is conducted despite emissions appearing to be in excess of the permitted level after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit for that day. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request.

a. The date and time of the observation
b. If visible emissions which appeared to be above the permitted limit were detected
c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
d. The name of the person conducting the opacity observations

31. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #32 through #37 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-15	No. 2 Power Boiler	PM	13.5	1143.8*
		Benzene	0.01	0.01
		Formaldehyde	0.05	0.20
		Hexane	1.06	4.64
		Naphthalene	0.01	0.01
		Toluene	0.01	0.03
		Xylene	0.01	0.01
		Arsenic	0.01	0.01
		Beryllium	3.02E-05	1.33E-4
		Cadmium	6.48E-04	2.84E-03
		Cobalt	0.01	0.03
		Manganese	0.01	0.02
		Mercury	1.53E-04	6.70E-04
		Nickel	0.10	0.50
		Phosphorous	0.02	0.05

SN	Description	Pollutant	lb/hr	tpy
		Selenium Polycyclic Organic Matter	0.01 0.01	0.01 0.01

* Plantwide Applicability Limitation

32. Natural gas and fuel oil (including No. 6, 5, 4, and 2) may be used as fuel in the No. 2 Power Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

33. The permittee shall not burn in excess of 1,083 gallons of fuel oil (including No. 6, 5, 4, and 2) per hour (demonstrated by dividing the daily fuel oil usage by 24 hours) or 9.5 million gallons of fuel oil per twelve consecutive months in the No. 2 Power Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

34. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #32 and #33. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each month’s individual data for the annual fuel oil usage limit shall be submitted in accordance with General Provision #7. The types of fuel combusted and highest hourly fuel oil usage during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

35. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

36. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall be verified by testing or by vendors’ guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

37. While firing natural gas, the permittee shall test emissions for the listed pollutants from the No. 2 Power Boiler once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The permittee shall test each of the No. 1 Power Boiler stacks (stacks A and B). The runs for stack A shall be averaged together. The runs for stack B shall be averaged together. The average run for stack A shall be added to the average run for

stack B. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

38. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 2 Power Boiler, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

39. Because the No. 2 Power Boiler operates as a backup unit only, the permittee shall complete the testing requirements of Specific Condition #37 within 60 days of full operation of the boiler. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

SN-51 - Digesters and Blow Tank

Source Description

In the kraft pulp mill, hardwood and/or softwood chips are cooked with white liquor in fourteen batch digesters. The fourteen batch digesters can be used by either the B-Line to handle softwood or by the C-Line to handle hardwood. Three digester blow tanks are associated with the fourteen batch digesters.

When the digesters are uncapped and filled with chips, some of the gas is displaced from the digesters to the atmosphere. This gas stream is the source of the digester's emissions. During the cooking process, the non-condensable gases (NCGs) from the digesters and blow tanks are sent through a series of condensers and are then routed to the NCG system. Turpentine is recovered as a byproduct from the condensed vapors. The digesters are now subject to NSPS Subpart BB as a result of the addition of the fourteenth digester vessel in 2005.

Specific Conditions

40. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #42, #44, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501, §19.901 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-51	Digesters and Blow Tank	VOC	15.7	1913.4*

* Plantwide Applicability Limitation

41. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #42, #44, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-51	Digesters and Blow Tank	TRS	3.10	833.4*
		Acetone	0.20	0.50
		1,1,2-Trichloroethane	0.01	0.04
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		Acetaldehyde	0.10	0.36
		Acrolein	4.03E-03	1.53E-02
		Benzene	0.01	0.01
		Carbon Tetrachloride	0.05	0.16

SN	Description	Pollutant	lb/hr	tpy
		Chloroform	0.44	1.65
		Formaldehyde	0.01	0.03
		Hexane	0.01	0.02
		Methanol	1.71	6.48
		Methyl Isobutyl Ketone	0.01	0.02
		Styrene	0.02	0.05
		Toluene	0.02	0.04
		Xylene	0.02	0.05

* Plantwide Applicability Limitation

42. The permittee shall not consume in excess of 2,726,294 tons of chips at the digesters per twelve consecutive months from the kraft pulp process. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

43. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #42. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month’s data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

44. The non-condensable gases shall be routed to efficient incineration at the No. 1 Lime Kiln or the No. 2 Lime Kiln. [Regulation 19, §19.901 and 40 CFR Part 52 Subpart E]

NESHAP Subpart S Standard

45. The low volume high concentration gases from the digesters, the blow tank, the blow heat evaporator, and the blow heat accumulator shall be enclosed and vented into a closed-vent system and routed to efficient incineration in either the Lime Kiln No. 1 (SN-09) or the Lime Kiln No. 2 (SN-10). [40 CFR §63.443(a)(1) and (c) and Regulation 19, §19.304]

NSPS Subpart BB Standard

46. SN-51 is considered an affected source and is subject to all applicable requirements of 40 CFR Part 60 Subpart BB. [Regulation 19, §19.304 and 40 CFR §60.280]

47. On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of 40 CFR Part 60, Subpart BB shall cause to be discharged into the atmosphere, from any digester system, any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent

oxygen, unless the following conditions are met: [Regulation 19, §19.304 and 40 CFR §60.283(a)(1)]

a. The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of Subpart BB; or
b. The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of Subpart BB; or
c. The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 650°C (1200°F) for at least 0.5 second; or
d. The gases from the digester system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, uncorrected for oxygen content.
e. The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg air dried pulp (ADP) (0.01 lb/ton ADP).

Evergreen currently complies with §60.283(a)(1)(iii) or item c. of this specific condition.

SN-22, 23, and 44 - The Pulping Area

Source Description

The pulp slurry from the digesters is screened to remove knots (SN-44), washed and thickened in two separate lines prior to being sent to the bleach plant. The B-line Brownstock Washer (SN-22) consists of a four stage washer with four vents to the atmosphere. The C-line Brownstock Washer (SN-23) also consists of a four stage washer that has four vents to the atmosphere. The two brownstock washers and the knotter have been included in a bubble. The emission rates in the table below represent the emissions from the Pulping Area (SN-22, SN-23 and SN-44) bubble. The brownstock washers are not subject to NSPS Subpart BB.

Specific Conditions

48. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #42 and #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-22, 23, and 44	The Pulping Area	VOC	166.8	1913.4*

* Plantwide Applicability Limitation

49. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #**42** and #162 through #181. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-22, 23, and 44	The Pulping Area	TRS	12.5	833.4*
		Acetone	4.2	14.2
		1,2,4-Trichlorobenzene	0.01	0.03
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		1,1,2-Trichloroethane	0.01	0.03
		Acetaldehyde	1.51	5.10
		Acetophenone	1.08	3.66
		Acrolein	2.82E-02	9.61E-02
		Benzene	0.01	0.01
		Biphenyl	0.02	0.04
		Carbon Disulfide	0.07	0.21
		Carbon Tetrachloride	0.01	0.03

SN	Description	Pollutant	lb/hr	tpy
		Carbonyl Sulfide	0.2	0.6
		Chloroform	0.10	0.17
		Chloromethane	0.10	0.10
		Cresol	3.70	12.6
		Cumene	0.20	0.70
		Formaldehyde	0.20	0.60
		Hexane	0.02	0.04
		Hexachloroethane	2.20	7.50
		Methanol	67.6	230.2
		Methyl Isobutyl Ketone	0.11	0.35
		Methylene Chloride	0.04	0.14
		Naphthalene	0.40	1.20
		Phenol	0.66	2.35
		Propionaldehyde	0.07	0.21
		Styrene	0.10	0.10
		Toluene	0.03	0.08
		Vinyl Chloride	0.06	0.18
		Xylene	0.10	0.20

* Plantwide Applicability Limitation

SN-52 - Groundwood Mill

Source Description

In the groundwood mill, mechanical grinders are used to produce pulp. The groundwood mill area consists of five grinders and four washers. The pulp produced in the groundwood process is currently used at the No. 1 Paper Machine.

Specific Conditions

50. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #52 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-52	Groundwood Mill	VOC	32.0	1913.4*

* Plantwide Applicability Limitation

51. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #52. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-52	Groundwood Mill	Acetaldehyde Acrolein Benzene Biphenyl 1,3-Butadiene Carbon Disulfide Carbon Tetrachloride Chloroform Cumene 1,2-Dichloroethane Hexane Formaldehyde Methanol Methyl Isobutyl Ketone Methylene Chloride Naphthalene Phenol	0.25 1.73E-01 0.01 0.01 0.01 0.03 0.01 0.08 0.11 0.01 0.01 0.04 0.55 0.19 0.01 0.05 0.31	0.73 5.03E-01 0.01 0.03 0.01 0.07 0.01 0.23 0.32 0.01 0.01 0.10 1.59 0.53 0.03 0.13 0.90

SN	Description	Pollutant	lb/hr	tpy
		Propionaldehyde Styrene Toluene 1,1,2-Trichloroethane 1,2,4-Trichlorobenzene Xylene	0.16 0.01 0.04 0.01 0.04 0.01	0.46 0.01 0.10 0.01 0.09 0.01

52. The permittee shall not produce in excess of 81,111 air dried tons of pulp per twelve consecutive months from the groundwood pulp process. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

53. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #52. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month’s data shall be submitted in accordance General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-24, 25, 26, 27, 45, 46, and 47 - The Bleach Plant

Source Description

Washed pulp from the B and C Pulp Lines is bleached in the B and C Bleach Plant Lines. Both lines are capable of bleaching hardwood and/or softwood pulp. Each stage consists of a reaction tower, washer and seal tank. Bleached pulp is stored prior to being sent to the papermaking areas. Each bleach plant line routes all chlorine dioxide towers and washers to a scrubber. The emissions from the extraction towers are not vented to the Bleach Plant Scrubber but are either vented directly to the atmosphere or vented to a washer which is vented directly to the atmosphere. Methanol is used in the chlorine dioxide generation process. Vent gases from the chlorine dioxide generation plant are also vented through the bleach plant scrubber system. Chlorine dioxide has been substituted for chlorine in the bleaching process.

The Bleach Plant sources consist of the 4B Extraction Washer Hood Vent (SN-24), the Bleach Plant Seal Pit Vent (SN-25), the C-Line Extraction Washer Hood Vent (SN-26), the Bleach Plant Scrubber (SN-27), the 6B Extraction Washer Hood Vent (SN-45), the 2C Extraction Stage Tower (SN-46), and the Extraction Tower Non-Point Source Emissions (SN-47). These Bleach Plant sources are included in a single bubble. The emission rates in the table below represent the emissions from the bubble. Both the B and C Lines have 100% chlorine dioxide substitution. Both Bleach Plant Lines (and the chlorine dioxide plant) route all chlorine dioxide containing gas streams to the single Bleach Plant Scrubber.

The following bleaching vents are required to be collected and treated because they are part of a bleaching stage where chlorinated compounds are introduced:

B-Line Towers (3B, 5B, 7B)
C-Line Towers (1C, 4C)
B-Line Washers (3B, 5B, 7B)
C-Line Washers (1C, 4C)
B-Line Seal Pits (3B, 5B, 7B)
C-Line Seal Pits (1C, 4C)

The vents from each of the above-listed sources are currently collected and treated in the Bleach Plant Scrubber (SN-27).

Specific Conditions

54. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #57, #59, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-24, 25, 26, 27, 45, 46, and 47	The Bleach Plant	CO VOC	117.1 16.7	2041.1* 1913.4*

* Plantwide Applicability Limitation

55. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #57 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-24, 25, 26, 27, 45, 46, and 47	The Bleach Plant	TRS	1.9	833.4*
		Acetone	0.1	0.2
		1,1,2-Trichloroethane	0.08	0.30
		1,2,4-Trichlorobenzene	0.18	0.71
		1,2-Dichloroethane	0.08	0.27
		1,3-Butadiene	0.01	0.02
		Acetaldehyde	0.45	1.78
		Acetophenone	0.01	0.01
		Acrolein	5.37E-03	1.94E-02
		Acrylonitrile	0.01	0.03
		Benzene	0.02	0.06
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.01	0.04
		Carbon Tetrachloride	0.24	0.86
		Chloroform	0.40	1.55
		Cresol	0.60	2.15
		Cumene	0.02	0.07
		Formaldehyde	0.06	0.20
		Hexachloroethane	2.16	7.76
		Hexane	0.01	0.01
		Iodomethane	0.01	0.01
		Methylene Chloride	0.16	0.63
		Methanol	5.04	20.0
		Methyl Isobutyl Ketone	0.10	0.43
		Naphthalene	0.01	0.01
		Phenol	0.34	1.20
		Propionaldehyde	0.04	0.12
		Styrene	0.06	0.22
		Toluene	0.02	0.05
		Xylene	0.05	0.18

* Plantwide Applicability Limitation

56. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #61 through #74. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
24 25 26 27 45 46	4B Extraction Washer Hood Vent Bleach Plant Seal Pit C-Line Extraction Washer Hood Vent Bleach Plant Scrubber 6B Extraction Washer Hood 3C Extraction Stage Tower	Chlorine Chlorine Dioxide	0.94 0.26	3.39 1.10

57. The permittee shall not produce in excess of 620,135 air dried tons of total bleach kraft pulp per twelve consecutive months from the Bleach Plant Operations. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

58. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #57. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month’s data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

59. The permittee shall test emissions for the listed pollutants from the Bleach Plant, excluding SN-47 which consists only of non-point source emissions, once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
CO	10

60. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the Bleach Plant, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

NESHAP Subpart S Standard

61. The HAP emissions from the following sources shall be enclosed and vented in a closed-vent system and routed to the Bleach Plant Scrubber (SN-27) for reduction [40 CFR §63.445(b) and Regulation 19, §19.304]:

B-Line Towers (3B, 5B, 7B)
C-Line Towers (1C, 4C)
B-Line Washers (3B, 5B, 7B)
C-Line Washers (1C, 4C)
B-Line Seal Pits (3B, 5B, 7B)
C-Line Seal Pits (1C, 4C)

62. The Bleach Plant Scrubber (SN-27) shall meet one of the following requirements in order to demonstrate compliance with the HAP emission reduction requirement [40 CFR §63.445(c) and Regulation 19, §19.304]:
    a. Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99% or more by weight; or
    b. Achieve a treatment device outlet concentration of 10 ppm or less by volume of total chlorinated HAP; or
    c. Achieve a treatment device outlet mass emission rate of 0.002 pounds of total chlorinated HAP mass per ton of ODP.

63. The permittee shall not use any hypochlorite or free chlorine in the bleaching system process. [40 CFR §63.445(d) and Regulation 19, §19.304]

64. The permittee shall maintain negative pressure at each enclosure or hood opening as demonstrated by Specific Condition #65. Each enclosure or hood opening closed during the initial performance test required by Specific Condition #67 shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [40 CFR §63.450(b) and Regulation 19, §19.304]

Monitoring Requirements

65. The permittee shall perform a visual inspection of each enclosure opening at least every 30 days to ensure the opening is maintained in the same closed and sealed position as during the performance test except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [40 CFR §63.453(k)(1) and Regulation 19, §19.304]

66. The permittee shall conduct a visual inspection of the reasonably accessible portions of the closed vent system at least every 30 days. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects. [40 CFR §63.453(k)(2) and Regulation 19, §19.304]

67. The permittee shall perform initial and subsequent annual tests to ensure that each enclosure opening is maintained at negative pressure. The tests shall be conducted using one of the following procedures [40 CFR §63.453(k)(4) and Regulation 19, §19.304]:
    a. An anemometer to demonstrate flow in the enclosure opening.
    b. Measure the static pressure across the opening.
    c. Smoke tubes to demonstrate flow into the enclosure opening.

68. The permittee shall undertake the following corrective actions as soon as practicable if an inspection required by Specific Conditions #65 and #66 identifies any visible defects in the ductwork, piping, enclosures, or connections to covers, or if an instrument reading of 500 ppm by volume of greater above background is measured, or if any enclosure openings are not maintained at negative pressure [40 CFR §63.453(k)(6) and Regulation 19, §19.304]:
    a. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
    b. The repair or corrective action shall be completed no later than 15 days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the permittee determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from the delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

69. The permittee shall install, calibrate, certify, operate, and maintain (according to manufacturer’s specifications) a continuous monitoring system (CMS) on the Bleach Plant Scrubber (SN-27). The CMS shall be operated to measure the following parameters [40 CFR §63.453(c) and Regulation 19, §19.304]:
    a. The pH of the scrubber effluent media;
    b. The gas scrubber recirculation flow rate; and
    c. Constant operation of the fan.

70. The permittee shall perform an initial performance test on the Bleach Plant Scrubber (SN-27) to ensure that the control device meets one of the requirements listed in Specific

Condition #62. During the initial performance test or any subsequent performance test, the operating parameters listed in Specific Condition #69 shall be measured in order to establish values or ranges in order to demonstrate continuous compliance with reduction requirement. [40 CFR §63.453(n) and Regulation 19, §19.304]

71. The permittee shall operate the Bleach Plant Scrubber (SN-27) consistent with the minimum and maximum operating parameters as established during the most recent performance tests. Operation of the control device in a manner that would lead to excess emissions (caused by events other than that in the mill’s startup, shutdown, and malfunction plan) shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions. [40 CFR §63.453(o) and Regulation 19, §19.304]

Recordkeeping and Reporting Requirements

72. The permittee shall prepare and maintain a site-specific inspection plan for each applicable enclosure opening and closed-vent system including drawings or schematics of the components of the affected equipment. The following information shall be recorded for each inspection [40 CFR §63.454(b) and Regulation 19, §19.304]:
    a. date of inspection;
    b. the equipment type and identification;
    c. results of the negative pressure tests for enclosures (when applicable);
    d. results of leak detection tests (when applicable);
    e. the nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
    f. the date the defect or leak was detected and the date of each attempt to repair the defect or leak;
    g. repair methods applied in each attempt to repair the defect or leak;
    h. the reason for the delay if the defect or leak is not repaired within 15 days after discovery;
    i. the expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
    j. the date of successful repair of the defect or leak;
    k. the position and duration of opening of bypass line valves and the condition of any valve seals; and
    l. the duration of the use of bypass valves on computer controlled valves.

73. The permittee shall sample the vent gas stream out of the Bleach Plant Scrubber (SN-27) during the initial performance test using Reference Method 26A as identified in 40 CFR Part 63 Subpart S in order to demonstrate compliance with either the percent reduction, outlet concentration, or outlet mass emission rate requirements. [40 CFR §63.457(b) and Regulation 19, §19.304]

74. The permittee shall measure the total chlorinated HAPs concentration as chlorine at the outlet of the Bleach Plant Scrubber (SN-27) in order to demonstrate compliance with the

total HAP emission reduction requirements. [40 CFR §63.457(h) and Regulation 19, §19.304]

SN-55 - Methanol Tank

Source Description

The Methanol Tank is associated with the Bleach Plant Operations. Methanol is used in the Bleach Plant in the chlorine dioxide generation process. The Methanol Tank is not subject to the New Source Performance Standards, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels due to a volume less than 75 cubic meters (19,812 gallons).

Tank Name	Contents	Size D (ft) x H (ft)	Volume (gal)
Methanol Tank	Methanol	10.5 x 23	14,465

Specific Conditions

75. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #77 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-55	Methanol Tank	VOC	8.5	1913.4*

* Plantwide Applicability Limitation

76. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #77. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-55	Methanol Tank	Methanol	8.5	0.5

77. The permittee shall not exceed a throughput of 1,400,212 gallons of methanol at the Methanol Tank per twelve consecutive months. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

78. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #77. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month’s data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

Papermaking Operations

Source Description

The Mill produces various types of paper for sale. The paper is produced from the No. 1 and No. 2 Paper Machines (SN-53 and SN-54). The products include a coated publication paper and/or newsprint using groundwood, kraft pulp and recycled pulp; and bleached paperboard using a mixture of pine and hardwood pulp from the bleach plant, bleached chemical thermal mechanical pulp and recycled pulp.

The papermaking operations include a process for reclaiming fiber from polyethylene coated paper. This paper may come from the Mill or other facilities. The process may include de-inking.

Paper from the paper machines can go through the Extruders (SN-28 thru SN-40) or Off Machine Coater to apply a coating. The paper is cut and packaged for sale in a finishing and shipping operation.

SN-53 - No. 1 Paper Machine

Source Description

The No. 1 Paper Machine produces various types of paper and paperboard for sale including, but not limited to, lightweight coated publication paper using groundwood, recycled pulp, hardwood pulp, and some pine kraft pulp from the Bleach Plant.

Specific Conditions

79. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #81 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-53	No. 1 Paper Machine	VOC	28.6	1913.4*

* Plantwide Applicability Limitation

80. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #81. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-53	No. 1 Paper Machine	Acetone	0.3	1.2
		1,2,4-Trichlorobenzene	0.29	1.14
		1,1,2-Trichloroethane	0.03	0.11
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.79	3.14
		Acrolein	3.69E-02	1.48E-01
		Benzene	0.02	0.07
		Biphenyl	0.06	0.21
		Carbon Disulfide	0.02	0.07
		Carbon Tetrachloride	0.12	0.47
		Chloroform	0.10	0.37
		Cumene	0.01	0.04
		Formaldehyde	0.16	0.61
		Hexane	0.01	0.03
		Methanol	1.70	6.74
		Methyl Isobutyl Ketone	0.05	0.19

SN	Description	Pollutant	lb/hr	tpy
		Methylene Chloride Naphthalene Phenol Propionaldehyde Styrene Toluene Xylene	0.05 0.01 0.18 0.18 0.07 0.01 0.06	0.18 0.04 0.70 0.71 0.28 0.02 0.22

81. The permittee shall not produce in excess of 189,800 tons of unfinished product per twelve consecutive months from the No. 1 Paper Machine. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

82. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #81. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month’s data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-54 - No. 2 Paper Machine

Source Description

The No. 2 Paper Machine produces various types of paper and paperboard for sale including, but not limited to, heavy weight bleach board using hardwood, recycled pulp, bleached chemical thermal mechanical pulp, and pine kraft pulp from the Bleach Plant.

Specific Conditions

83. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #85 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-54	No. 2 Paper Machine	VOC	92.5	1913.4*

* Plantwide Applicability Limitation

84. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #85. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-54	No. 2 Paper Machine	Acetone	0.9	3.2
		1,2,4-Trichlorobenzene	0.89	3.18
		1,1,2-Trichloroethane	0.09	0.30
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	2.45	8.74
		Acrolein	1.15E-02	4.11E-01
		Benzene	0.05	0.17
		Biphenyl	0.17	0.59
		Carbon Disulfide	0.06	0.20
		Carbon Tetrachloride	0.37	1.30
		Chloroform	0.29	1.01
		Cumene	0.03	0.10
		Formaldehyde	0.48	1.70
		Hexane	0.02	0.06
		Methanol	5.27	18.8
		Methyl Isobutyl Ketone	0.15	0.53

SN	Description	Pollutant	lb/hr	tpy
		Methylene Chloride Naphthalene Phenol Propionaldehyde Styrene Toluene Xylene	0.15 0.04 0.55 0.56 0.22 0.02 0.18	0.51 0.12 1.95 1.97 0.77 0.05 0.61

85. The permittee shall not produce in excess of 529,250 tons of unfinished product per twelve consecutive months from the No. 2 Paper Machine. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

86. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #85. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-28 through SN-40 - No. 6 through No. 9 Extruders

Source Description

The four extruders have been included in a bubble. The emissions below represent the total emissions from the bubble. Natural gas is the fuel for heating the paper surface prior to resin application.

The No. 6 Extruder consists of three burners, one treater, and three extrusion vents. The maximum heat input capacity of the No. 6 Extruder is 8.486 MMBtu per hour. Both the No. 7 and the No. 8 Extruders consist of one burner, one treater, and two extrusion vents. The maximum heat input capacity of each extruder is 4.076 MMBtu per hour. The No. 9 Extruder consists of two burners, one treater, and two extrusion vents. The maximum heat input capacity of the No. 9 Extruder is 6.926 MMBtu per hour.

The extruders are subject to 40 CFR Part 63, Subpart JJJJ which had a compliance date of December 5, 2005. Requirements of Subpart JJJJ may be found in Plantwide Conditions **38 - 41** of this permit.

Specific Conditions

87. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #90, #91, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-28 through SN-40	No. 6 through No. 9 Extruders	PM_{10}	0.2	836.1*
		SO_2	0.1	392.4*
		NO_X	2.4	1458.1*
		CO	2.0	2041.1*
		VOC	16.1	1913.4*
		Lead	1.16E-05	0.69*

* Plantwide Applicability Limitation

88. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #91 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-28 through	No. 6 through No. 9 Extruders	PM	0.2	1143.8*
		Benzene	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
SN-40		Formaldehyde	0.01	0.01
		Hexane	0.05	0.19
		Naphthalene	0.01	0.01
		Toluene	0.01	0.01
		Arsenic	4.62E-06	2.03E-05
		Cadmium	2.55E-05	1.12E-04
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	6.01E-06	2.64E-05
		Nickel	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01

* Plantwide Applicability Limitation

89. The permittee shall not cause to be discharged to the atmosphere from the four extruders' gases that exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Continuing compliance with this specific condition shall be demonstrated by compliance with Specific Condition #91. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

90. The permittee shall not use in excess of 90,000 tons of polyresin per twelve consecutive months at the No. 6 thru No. 9 Extruders. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

91. Natural gas shall be the only fuel used for the four extruders. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

92. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #90 and #91. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month's data for the annual polyresin usage limit shall be submitted in accordance with General Provision #7. The type of fuel combusted during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

93. The permittee must demonstrate compliance with the applicable requirements of 40 CFR Part 63, Subpart JJJJ to the Extruders. This includes, but is not limited to, the requirements specified in Plantwide Conditions #**38** through #**41**.

SN-41 and SN-42 - Off Machine Coaters

Source Description

The Off Machine Coaters consist of four IR Dryer Burners (SN-41) with a combined maximum natural gas firing rate of 20 million Btu per hour and four Air Foil Burners (SN-42) with a combined maximum natural gas firing rate of 38 million Btu per hour. The emissions from the Off Machine Coaters (SN-41 and SN-42) are included in a bubble.

The Off Machine Coaters are subject to 40 CFR Part 63, Subpart JJJJ which had a compliance date of December 5, 2005. Requirements of Subpart JJJJ may be found in Plantwide Conditions #**38** - #**41** of this permit.

Specific Conditions

94. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #97 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-41 and SN-42	Off Machine Coaters	PM_{10} SO_2 NO_X CO VOC Lead	0.5 0.1 5.7 4.8 0.4 2.85E-05	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

95. The permittee shall not cause to be discharged to the atmosphere from the Off Machine Coaters gases which exhibit opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Continuing compliance with this specific condition shall be demonstrated by compliance with Specific Condition #97. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

96. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the ammonia emission limit will be demonstrated by compliance with Specific Conditions #81 and #82 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-41 and	Off Machine	PM	0.5	1143.8*

SN	Description	Pollutant	lb/hr	tpy
SN-42	Coaters	Benzene	0.01	0.01
		Formaldehyde	0.01	0.02
		Hexane	0.11	0.45
		Naphthalene	0.01	0.01
		Toluene	0.01	0.01
		Arsenic	1.14E-05	4.99E-05
		Cadmium	6.26E-05	2.74E-04
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	1.48E-05	6.48E-05
		Nickel	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01

* Plantwide Applicability Limitation

97. The permittee shall only use natural gas as the fuel for the IR Dryer Burners and the Air Foil Burners. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

98. The permittee shall maintain records which demonstrate compliance with the limit listed in Specific Condition #97. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. The type of fuel combusted during the reporting period at the Off Machine Coaters shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

99. The permittee must demonstrate compliance with the applicable requirements of 40 CFR Part 63, Subpart JJJJ. This includes, but is not limited to, the requirements specified in Plantwide Conditions #**38** through #**41**.

No. 2 through No. 4 Recovery Boilers
No. 2 through No. 4 Smelt Dissolving Tanks

Source Description

Evergreen operates three liquor recovery systems that process combined Kraft black liquor from both the hardwood and softwood pulping operations. The Mill recovers cooking chemicals by firing black liquor solids into any of the three direct contact recovery boilers (Recovery Boilers No. 2, 3, and 4). The organics from the liquor are combusted to generate heat for process steam while the inorganic chemicals collect in the bottom of the boilers in the form of molten smelt. Each recovery boiler at the Mill operates as an independent system, with its own smelt dissolving tank, ESP, and exhaust stack.

The molten smelt from each recovery boiler is directed to one of three dedicated tanks, where it is dissolved into weak wash or water to form green liquor, a prelude step to regenerating white liquor in the causticizing operation. After processing in the Caustic Plant Area, the recovered chemicals are re-used in the digesters. The recovery boilers and smelt tanks are subject to 40 CFR Part 63, Subpart MM and, due to an extension granted on March 11, 2003, began complying with Subpart MM requirements on March 12, 2005. The requirements of Subpart MM are outlined in Plantwide Conditions #**15** through #**33**. Because these sources are subject to Subpart MM, they are exempt from 40 CFR Part 63, Subpart DDDDD (Boiler MACT).

Evergreen utilizes an oxygen injection process to reduce sulfur compounds in the kraft cooking liquor prior to burning it in the recovery boilers (SN- 02 through 04), which aids in the reduction of TRS emissions. The oxygen injection system comprises of an oxygen storage tank(s), vaporizer, oxygen feed skid with instrumentation and controls, oxygen reactor and a recirculation pump with approximately 1200 gpm capacity. The oxygen system is adjacent to the existing Black Liquor Oxidation (BLOX) system. The injection point is after the BLOx tank and the oxygen usage rate is 7-15 tons per day.

Periodically, necessary maintenance activities require that the BLOx Unit (SN-21), which acts as a TRS emission control device for the three recovery boilers, be shutdown. Therefore, higher TRS emissions result from the recovery boilers when the BLOx Unit is shutdown.

SN-02 - No. 2 Recovery Boiler

Source Description

The No. 2 Recovery Boiler is a 400 million Btu per hour boiler. The No. 2 Recovery Boiler fires black liquor solids as part of the chemical recovery process but also has the capability of firing natural gas and fuel oil (including No. 6, 5, 4, 2 and petroleum based defoaming agent).

The No. 2 Recovery Boiler is associated with the original mill. The No. 2 Recovery Boiler is not subject to NSPS Subpart BB. The No. 2 Recovery Boiler is equipped with an ESP and is subject to 40 CFR Part 63, Subpart MM and began complying on March 12, 2005.

Specific Conditions

100. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #105 through #112 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-02	No. 2 Recovery Boiler	PM_{10} SO_2 NO_X CO VOC Lead	24.6 200.0 109.8 233.5 28.0 9.00E-04	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

101. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #104 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and §19.804 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-02	No. 2 Recovery Boiler	TRS	27.7	833.4*
		40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% by volume oxygen		

* Plantwide Applicability Limitation

102. The permittee shall comply with the opacity and monitoring standards of 40 CFR Part 63, Subpart MM for the recovery boilers. Compliance with this specific condition shall be demonstrated through Plantwide Conditions #**20**, #**23**, and #**24**. [Regulation 19, §19.304 and 40 CFR Part 63 Subpart MM]

103. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #105 through #110 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-02	No. 2 Recovery Boiler	PM	24.6	1143.8*
		Acetone	0.7	2.7
		1,1,2-Trichloroethane	0.05	0.21
		1,2,4-Trichlorobenzene	0.02	0.09
		1,2-Dichloroethane	0.01	0.04
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.65	2.83
		Acetophenone	0.41	1.79
		Acrolein	1.25E-02	5.47E-02
		Acrylonitrile	0.01	0.01
		Benzene	0.12	0.49
		Biphenyl	0.01	0.03
		Carbon Disulfide	0.03	0.11
		Carbon Tetrachloride	0.01	0.01
		Carbonyl Sulfide	0.82	3.57
		Chlorine	0.05	0.20
		Chloroform	0.01	0.04
		Chloromethane	1.74	7.62
		Cumene	0.01	0.01
		Cresol	0.95	4.16
		Formaldehyde	0.26	1.13
		Hexachloroethane	0.94	4.09
		Hexane	0.71	5.89[1]
		Iodomethane	0.03	0.09
		Methanol	6.45	28.3
		Methyl Isobutyl Ketone	0.02	0.06
		Methylene Chloride	0.06	0.25
		Naphthalene	0.14	0.60
		Phenol	0.49	2.14
		Propionaldehyde	0.01	0.01
		Styrene	0.02	0.08
		Toluene	0.03	0.11
		Xylene	0.02	0.08
		Arsenic	0.01	0.01
		Beryllium	2.04E-05	8.91E-05
		Cadmium	0.01	0.01
		Cobalt	0.01	0.02
		Manganese	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
		Mercury Nickel Phosphorus Selenium Polycyclic Organic Matter	1.02E-04 0.05 0.01 0.01 0.01	8.51E-04 0.22 0.03 0.01 0.01

[1] Annual emissions are for all 3 boilers combined.
* Plantwide Applicability Limitation

104. The permittee shall operate and maintain a CEMS which records the TRS concentration of gases leaving the No. 2 Recovery Boiler. The TRS monitor shall be operated in accordance with the requirements of 40 CFR §60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions. A copy of the Department Continuous Emission Monitoring Systems Conditions is provided in Appendix A. A copy of §19.801 et seq. of Regulation 19 is provided in Appendix B. [Regulation 19, §19.703 and §19.801, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

105. The permittee shall test emissions for the listed pollutants from the No. 2 Recovery Boiler once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A
H_2SO_4	8

106. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 2 Recovery Boiler, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

107. The permittee may fire black liquor, natural gas, and fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) in the No. 2 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

108. The permittee shall not fire in excess of 296,964 dry tons of black liquor solids per twelve consecutive months in the No. 2 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

109. The permittee shall not fire in excess of 5.06 million gallons of fuel oil (including Nos. 6, 5, 4, 2 and petroleum-based defoaming agent) per twelve consecutive months in the No. 2 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

110. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #107 through #109. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month’s individual data for the annual black liquor solids and fuel oil combustion limits shall by submitted in accordance with General Provision #7. The type of fuel combusted during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

111. The sulfur content of the fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

112. The sulfur content of the fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) shall be verified by testing or by vendors’ guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil

shipment and the associated sulfur content. This record shall be updated with each shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

SN-03 - No. 3 Recovery Boiler

Source Description

The No. 3 Recovery Boiler is a 400 million Btu per hour boiler. The No. 3 Recovery Boiler fires black liquor solids as part of the chemical recovery process but also has the capability of firing natural gas and fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent).

The No.3 Recovery Boiler was installed in 1959. The No. 3 Recovery Boiler is not subject to NSPS Subpart BB. The No. 3 Recovery Boiler is equipped with an ESP and is subject to 40 CFR Part 63, Subpart MM and began complying on March 12, 2005.

Specific Conditions

113. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #118 through #125 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-03	No. 3 Recovery Boiler	PM_{10}	23.0	836.1*
		SO_2	200.0	392.4*
		NO_X	109.8	1458.1*
		CO	233.5	2041.1*
		VOC	28.0	1913.4*
		Lead	0.0002	0.69*

* Plantwide Applicability Limitation

114. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #117 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and §19.801 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-03	No. 3 Recovery Boiler	TRS	24.4	833.4*
		40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% by volume oxygen		

* Plantwide Applicability Limitation

115. The permittee shall comply with the opacity and monitoring standards of 40 CFR Part 63, Subpart MM for the recovery boilers. Compliance with this specific condition shall be demonstrated through Plantwide Conditions #**20**, #**23**, and #**24**. [Regulation 19, §19.304 and 40 CFR Part 63 Subpart MM]

116. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #118 through #123 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-03	No. 3 Recovery Boiler	PM	23.0	1143.8*
		Acetone	0.7	2.7
		1,1,2-Trichloroethane	0.05	0.21
		1,2,4-Trichlorobenzene	0.02	0.09
		1,2-Dichloroethane	0.01	0.04
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.65	2.83
		Acetophenone	0.41	1.79
		Acrolein	1.25E-02	5.47E-02
		Acrylonitrile	0.01	0.01
		Benzene	0.12	0.49
		Biphenyl	0.01	0.03
		Carbon Disulfide	0.03	0.11
		Carbon Tetrachloride	0.01	0.01
		Carbonyl Sulfide	0.82	3.57
		Chlorine	0.05	0.20
		Chloroform	0.01	0.04
		Chloromethane	1.74	7.62
		Cumene	0.01	0.01
		Cresol	0.95	4.16
		Formaldehyde	0.26	1.13
		Hexachloroethane	0.94	4.09
		Hexane	0.71	5.89[1]
		Iodomethane	0.03	0.09
		Methanol	6.45	28.3
		Methyl Isobutyl Ketone	0.02	0.06
		Methylene Chloride	0.06	0.25
		Naphthalene	0.14	0.60
		Phenol	0.49	2.14
		Propionaldehyde	0.01	0.01
		Styrene	0.02	0.08
		Toluene	0.03	0.11
		Xylene	0.02	0.08
		Arsenic	0.01	0.01
		Beryllium	2.04E-05	8.91E-05
		Cadmium	0.01	0.01
		Cobalt	0.01	0.02
		Manganese	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
		Mercury Nickel Phosphorus Selenium Polycyclic Organic Matter	1.02E-04 0.05 0.01 0.01 0.01	8.51E-04 0.22 0.03 0.01 0.01

[1]Annual emissions are for all 3 boilers combined.

* Plantwide Applicability Limitation

117. The permittee shall operate and maintain a CEMS which records the TRS concentration of gases leaving the No. 3 Recovery Boiler. The TRS monitor shall be operated in accordance with the requirements of 40 CFR 60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions. A copy of the Department Continuous Emission Monitoring Systems Conditions is provided in Appendix A. A copy of §19.801 et seq. of Regulation 19 is provided in Appendix B. [Regulation 19, §19.703 and §19.801, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

118. The permittee shall test emissions for the listed pollutants from the No. 3 Recovery Boiler once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A
H_2SO_4	8

119. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 3 Recovery Boiler, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

120. The permittee may fire black liquor, natural gas, and fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) in the No. 3 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

121. The permittee shall not fire in excess of 296,964 dry tons of black liquor solids per twelve consecutive months in the No. 3 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

122. The permittee shall not fire in excess of 5.06 million gallons of fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) per twelve consecutive months in the No. 3 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

123. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #120 through #122. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month’s individual data for the annual black liquor solids and fuel oil combustion limits shall by submitted in accordance with General Provision #7. The type of fuel combusted during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

124. The sulfur content of the fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

125. The sulfur content of the fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) shall be verified by testing or by vendors’ guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each

shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-04 - No. 4 Recovery Boiler

Source Description

The No. 4 Recovery Boiler is a 1,085 million Btu per hour boiler. The No. 4 Recovery Boiler fires black liquor solids as part of the chemical recovery process but also has the capability of firing natural gas and fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent).

The No. 4 Recovery Boiler was added in 1968. The No. 4 Recovery Boiler is not subject to NSPS Subpart BB. The No. 4 Recovery Boiler is equipped with an ESP and is subject to 40 CFR Part 63, Subpart MM and began complying on March 12, 2005.

Specific Conditions

126. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #131 through #140 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-04	No. 4 Recovery Boiler	PM_{10} SO_2 NO_X CO VOC Lead	65.4 542.5 297.8 633.2 76.0 2.84E-03	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

127. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #130 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and §19.801 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-04	No. 4 Recovery Boiler	TRS	44.6	833.4*
		40 ppm measured as H_2S on a dry basis and on a 12 hour average, corrected to 8% by volume oxygen		

* Plantwide Applicability Limitation

128. The permittee shall comply with the opacity and monitoring standards of 40 CFR Part 63, Subpart MM for the recovery boilers. Compliance with this specific condition shall be demonstrated through Plantwide Conditions #**20**, #**23**, and #**24**. [Regulation 19, §19.304 and 40 CFR Part 63 Subpart MM]

129. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #131 through #136 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-04	No. 4 Recovery Boiler	PM	65.4	1143.8*
		Acetone	1.7	7.3
		1,1,2-Trichloroethane	0.13	0.57
		1,2,4-Trichlorobenzene	0.06	0.25
		1,2-Dichloroethane	0.03	0.10
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	1.75	7.66
		Acetophenone	1.11	4.84
		Acrolein	3.39E-02	1.49E-01
		Acrylonitrile	0.01	0.01
		Benzene	0.31	1.33
		Biphenyl	0.02	0.08
		Carbon Disulfide	0.07	0.29
		Carbon Tetrachloride	0.01	0.02
		Carbonyl Sulfide	2.21	9.67
		Chlorine	0.12	0.53
		Chloroform	0.02	0.09
		Chloromethane	4.72	20.7
		Cresol	2.58	11.28
		Cumene	0.01	0.01
		Formaldehyde	0.70	3.05
		Hexachloroethane	2.53	11.1
		Hexane	1.92	5.89[1]
		Iodomethane	0.06	0.25
		Methanol	17.5	76.6
		Methyl Isobutyl Ketone	0.04	0.15
		Methylene Chloride	0.16	0.67
		Naphthalene	0.37	1.62
		Phenol	1.33	5.80
		Propionaldehyde	0.01	0.01
		Styrene	0.05	0.21
		Toluene	0.07	0.30
		Xylene	0.05	0.22
		Arsenic	0.01	0.02
		Beryllium	5.52E-05	2.42E-04
		Cadmium	0.01	0.01
		Cobalt	0.02	0.05
		Manganese	0.01	0.03

SN	Description	Pollutant	lb/hr	tpy
		Mercury Nickel Phosphorus Selenium Polycyclic Organic Matter	2.77E-04 0.16 0.02 0.01 0.01	9.30E-04 0.70 0.08 0.01 0.01

[1] Annual emissions are for all 3 boilers combined.

* Plantwide Applicability Limitation

130. The permittee shall operate and maintain a CEMS which records the TRS concentration of gases leaving the No. 4 Recovery Boiler. The TRS monitor shall be operated in accordance with the requirements of 40 CFR 60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions. A copy of the Department Continuous Emission Monitoring Systems Conditions is provided in Appendix A. A copy of §19.801 et seq. of Regulation 19 is provided in Appendix B. [Regulation 19, §19.703 and §19.801, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

131. The permittee shall test emissions for the listed pollutants from the No. 4 Recovery Boiler once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A
H_2SO_4	8

132. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 4 Recovery Boiler, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

133. The permittee may fire black liquor, natural gas, or fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) in the No. 4 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

134. The permittee shall not fire in excess of 805,482 dry tons of black liquor solids per twelve consecutive months in the No. 4 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

135. The permittee shall not fire in excess of 16.45 million gallons of fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) per twelve consecutive months in the No. 4 Recovery Boiler. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

136. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #133 through #135. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month’s individual data for the annual black liquor solids and fuel oil combustion limits shall by submitted in accordance with General Provision #7. The type of fuel combusted during the reporting period shall also be submitted in accordance with General Provision #7. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52 Subpart E]

137. The sulfur content of the fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) shall not exceed 1.0% by weight. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

138. The sulfur content of the fuel oil (including No. 6, 5, 4, 2 and petroleum-based defoaming agent) shall be verified by testing or by vendors’ guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each

shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

139. In the event that the ESP on the No. 4 Recovery Boiler goes down for repair, the No. 4 Recovery Boiler must go off line (30/70). The ESP has two halves. Each half of the ESP is designed to handle 70% of the maximum load. If one half of the ESP goes down, the black liquor feed to the boiler shall be reduced by 30%. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

140. The permittee shall maintain records which demonstrate compliance with the limit listed in Specific Condition #139. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-06 - No. 2 Smelt Dissolving Tank

Source Description

The No. 2 Smelt Dissolving Tank is equipped with a mist eliminator. This control device is designed to capture particulates and gaseous pollutants and return them to the Smelt Dissolving Tank. The No. 2 Smelt Dissolving Tank is associated with the original mill. The No. 2 Smelt Dissolving Tank is not subject to NSPS Subpart BB but is subject to 40 CFR Part 63, Subpart MM and must comply by March 12, 2005.

Specific Conditions

141. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #108, #146, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-06	No. 2 Smelt Dissolving Tank	PM_{10}	15.0	836.1*
		SO_2	0.6	392.4*
		NO_X	1.2	1458.1*
		VOC	1.5	2041.1*
		CO	0.3	1913.4*
		Lead	2.34E-05	0.69*

* Plantwide Applicability Limitation

142. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #108, #145, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and §19.801 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-06	No. 2 Smelt Dissolving Tank	TRS	1.2	833.4*
		0.0168 g/kg measured as grams H_2S/kg black liquor solids on a 12 hour average		

* Plantwide Applicability Limitation

143. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #108 and #146. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-06	No. 2 Smelt Dissolving Tank	PM	15.0	1143.8*
		Acetone	0.1	0.3
		Ammonia	4.1	17.8
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.04	0.17
		Acetophenone	0.04	0.15
		Acrolein	7.67E-03	3.36E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.03
		Carbonyl Sulfide	0.01	0.04
		Chlorine	0.07	0.29
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.02
		Cresol	0.12	0.46
		Cumene	0.01	0.03
		Formaldehyde	0.12	0.52
		Hexachlorocyclopentadiene	0.10	0.41
		Hexachloroethane	0.07	0.29
		Hexane	0.01	0.01
		Methanol	0.38	1.64
		Methyl Isobutyl Ketone	0.01	0.03
		Methylene Chloride	0.01	0.01
		Naphthalene	0.02	0.08
		Phenol	0.03	0.12
		Propionaldehyde	0.03	0.10
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		Arsenic	3.19E-05	1.40E-04
		Beryllium	3.77E-06	1.65E-05
		Cadmium	1.77E-05	7.73E-05
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	5.16E-06	2.26E-05
		Nickel	0.01	0.01
		Phosphorus	0.01	0.01
		Selenium	0.01	0.01

* Plantwide Applicability Limitation

144. The permittee shall not cause to be discharged to the atmosphere from the No. 2 Smelt Dissolving Tank gases that exhibit an opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #**21**, #**23**, and #**24**. [Regulation 19, §19.503, 40 CFR Part 52 Subpart E, and 40 CFR Part 63 Subpart MM]

145. The permittee shall conduct annual compliance testing of TRS emissions from the No. 2 Smelt Dissolving Tank. Testing shall be conducted in accordance with Plantwide Condition #3 and EPA Reference Method 16. Data reduction shall be performed as set forth in 40 CFR 60.8. A copy of §19.801 et seq. of Regulation 19 is provided in Appendix B. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and §19.801 and 40 CFR Part 52 Subpart E]

146. The permittee shall test emissions for the listed pollutants from the No. 2 Smelt Dissolving Tank once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

147. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site

specific tests exist for the No. 2 Smelt Dissolving Tank, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

SN-07 - No. 3 Smelt Dissolving Tank

Source Description

The No. 3 Smelt Dissolving Tank was installed in 1959. The No. 3 Smelt Dissolving Tank was originally equipped with a demister pad. In 1989, this emission control device was replaced with a venturi scrubber system. The Venturi Scrubber System is designed to capture particulates and gaseous pollutants and return them to the Smelt Dissolving Tank. The No. 3 Smelt Dissolving Tank is not subject to NSPS Subpart BB but is subject to 40 CFR Part 63, Subpart MM and must comply by March 12, 2005.

Specific Conditions

148. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #121, #153, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-07	No. 3 Smelt Dissolving Tank	PM_{10} SO_2 NO_X VOC CO Lead	5.2 0.6 1.2 1.5 0.3 2.34E-05	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

149. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #121 and #152. [Regulation 19, §19.501 and §19.801 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-07	No. 3 Smelt Dissolving Tank	TRS	1.2	833.4*
		0.0168 g/kg measured as grams H_2S/kg black liquor solids on a 12 hour average		

* Plantwide Applicability Limitation

150. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #121, #153, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-07	No. 3 Smelt Dissolving Tank	PM	5.2	1143.8*
		Acetone	0.1	0.3
		Ammonia	4.1	17.8
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.04	0.17
		Acetophenone	0.04	0.15
		Acrolein	7.67E-03	3.36E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.03
		Carbonyl Sulfide	0.01	0.04
		Chlorine	0.07	0.29
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.02
		Cresol	0.12	0.46
		Cumene	0.01	0.03
		Formaldehyde	0.12	0.52
		Hexachlorocyclopentadiene	0.10	0.41
		Hexachloroethane	0.07	0.29
		Hexane	0.01	0.01
		Methanol	0.38	1.64
		Methyl Isobutyl Ketone	0.01	0.03
		Methylene Chloride	0.01	0.01
		Naphthalene	0.02	0.08
		Phenol	0.03	0.12
		Propionaldehyde	0.03	0.10
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		Arsenic	3.19E-05	1.40E-04
		Beryllium	3.77E-06	1.65E-05
		Cadmium	1.77E-05	7.73E-05
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	5.16E-06	2.26E-05
		Nickel	0.01	0.01
		Phosphorus	0.01	0.01
		Selenium	0.01	0.01

* Plantwide Applicability Limitation

151. The permittee shall not cause to be discharged to the atmosphere from the No. 3 Smelt Dissolving Tank gases that exhibit an opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #**21**, #**23**, and #**24**. [Regulation 19, §19.503, 40 CFR Part 52 Subpart E, and 40 CFR Part 63 Subpart MM]

152. The permittee shall conduct annual compliance testing of TRS emissions from the No. 3 Smelt Dissolving Tank. Testing shall be conducted in accordance with Plantwide Condition #3 and EPA Reference Method 16. Data reduction shall be performed as set forth in 40 CFR 60.8. A copy of §19.801 et seq. of Regulation 19 is provided in Appendix B. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and §19.801 and 40 CFR Part 52 Subpart E]

153. The permittee shall test emissions for the listed pollutants from the No. 3 Smelt Dissolving Tank once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

154. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site

specific tests exist for the No. 3 Smelt Dissolving Tank, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

SN-08 - No. 4 Smelt Dissolving Tank

Source Description

The No. 4 Smelt Dissolving Tank was added in 1968. The No. 4 Smelt Dissolving Tank is equipped with a venturi scrubber system. In 1985, a larger fan and pump were installed on the scrubber. This control device is designed to capture particulates and gaseous pollutants and return them to the Smelt Dissolving Tank. The No. 4 Smelt Dissolving Tank is not subject to NSPS Subpart BB but is subject to 40 CFR Part 63, Subpart MM and must comply by March 12, 2005.

Specific Conditions

155. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #134, #160, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-08	No. 4 Smelt Dissolving Tank	PM_{10} SO_2 NO_X VOC CO Lead	20.2 1.5 3.0 4.1 0.8 6.35E-05	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

156. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #134, #159, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and §19.801 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-08	No. 4 Smelt Dissolving Tank	TRS	3.1	833.4*
		0.0168 g/kg measured as grams H_2S/kg black liquor solids on a 12 hour average		

* Plantwide Applicability Limitation

157. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #134, #160, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-08	No. 4 Smelt Dissolving Tank	PM	20.2	1143.8*
		Acetone	0.2	0.6
		Ammonia	11.1	48.4
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.02
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.11	0.45
		Acetophenone	0.09	0.39
		Acrolein	2.08E-02	9.11E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.02
		Carbon Disulfide	0.01	0.02
		Carbon Tetrachloride	0.02	0.08
		Carbonyl Sulfide	0.03	0.10
		Chlorine	0.18	0.77
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.05
		Cresol	0.28	1.23
		Cumene	0.02	0.06
		Formaldehyde	0.33	1.41
		Hexachlorocyclopentadiene	0.26	1.10
		Hexachloroethane	0.18	0.77
		Hexane	0.01	0.02
		Methanol	1.02	4.43
		Methyl Isobutyl Ketone	0.02	0.08
		Methylene Chloride	0.01	0.02
		Naphthalene	0.05	0.21
		Phenol	0.07	0.31
		Propionaldehyde	0.06	0.26
		Styrene	0.02	0.05
		Toluene	0.01	0.02
		Xylene	0.01	0.02
		Arsenic	8.66E-05	3.79E-04
		Beryllium	1.03E-05	4.47E-05
		Cadmium	4.79E-05	2.10E-04
		Cobalt	0.01	0.01
		Manganese	0.01	0.01
		Mercury	1.40E-05	6.13E-05
		Nickel	0.01	0.01
		Phosphorus	0.01	0.01
		Selenium	0.01	0.01

* Plantwide Applicability Limitation

158. The permittee shall not cause to be discharged to the atmosphere from the No. 4 Smelt Dissolving Tank gases that exhibit an opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #**21**, #**23**, and #**24**. [Regulation 19, §19.503, 40 CFR Part 52 Subpart E, and 40 CFR Part 63 Subpart MM]

159. The permittee shall conduct annual compliance testing of TRS emissions from the No. 4 Smelt Dissolving Tank. Testing shall be conducted in accordance with Plantwide Condition #3 and EPA Reference Method 16. Data reduction shall be performed as set forth in 40 CFR 60.8. A copy of §19.801 et seq. of Regulation #19 is provided in Appendix B. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and §19.801 and 40 CFR Part 52 Subpart E]

160. The permittee shall test emissions for the listed pollutants from the No. 4 Smelt Dissolving Tank once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

161. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site

specific tests exist for the No. 4 Smelt Dissolving Tank, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

SN-21 and SN-58 - Black Liquor Oxidation Tank and Process Liquor Tanks

Source Description

Weak black liquor from the brownstock washers is routed to storage tanks before being sent to the evaporator lines (which are vented to the NCG/LVHC system). Soap is extracted from the evaporators and sent to storage. Liquor from the evaporators is concentrated to about 50% solids and sent to strong black liquor storage before being oxidized in the black liquor oxidation system. Black liquor oxidation is used at the Mill to control TRS emissions from the recovery boilers, which have direct contact evaporators (DCEs). Liquor oxidation transforms reactive sodium salts to sodium thiosulfate, a stable compound that will not produce TRS compounds when contacted with hot combustion gases. The black liquor is oxidized with compressed air.

Evergreen utilizes an oxygen injection process to reduce sulfur compounds in the kraft cooking liquor prior to burning it in the recovery boilers (SN- 02 through 04), which aids in the reduction of TRS emissions. The oxygen injection system comprises of an oxygen storage tank(s), vaporizer, oxygen feed skid with instrumentation and controls, oxygen reactor and a recirculation pump with approximately 1200 gpm capacity. The oxygen system is adjacent to the existing Black Liquor Oxidation (BLOX) system. The injection point is after the BLOx tank and the oxygen usage rate is 7-15 tons per day.

The Black Liquor Oxidation Tank (SN-21) and the Process Liquor Tanks (SN-58) are associated with the Chemical Recovery Operations at Evergreen. The following table lists the Process Liquor Storage Tanks at Evergreen. Neither the Black Liquor Oxidation Tank nor the Process Liquor Storage Tanks are equipped with pollution control devices.

Tank Name	Contents	Size D(ft) x H(ft)	Volume (gal)
No.1 Strong Black Liquor Storage	50 % Black Liquor	30 x 40	211,400
No. 2 Strong Black Liquor Storage	50 % Black Liquor	30 x 40	211,400
No. 3 Strong Black Liquor Storage	50 % Black Liquor	30 x 40	211,400
No. 4 Strong Black Liquor Storage	50 % Black Liquor	30 x 40	211,400
No. 6 Strong Black Liquor Storage	50 % Black Liquor	30 x 40	211,400
No. 1 Weak Black Liquor Storage	12 % Black Liquor	26 x 30	119,800
No. 2 Weak Black Liquor Storage	12 % Black Liquor	26 x 30	119,800
No. 3 Weak Black Liquor Storage	21 % Black Liquor	35 x 40	287,718
No. 4 Weak Black Liquor Storage	21 % Black Liquor	35 x 40	287,718
No. 5 Weak Black Liquor Storage	21 % Black Liquor	32 x 32	61,000

Tank Name	Contents	Size D(ft) x H(ft)	Volume (gal)
No. 7 Weak Black Liquor Storage	21 % Black Liquor	30 x 30	158,500
Multi Use Storage Tank (MUST Tank)	50 % Black Liquor	80 x 30	1,127,386
West Dump Tank	21 % Black Liquor	24 x 19	64,300
East Dump Tank	21 % Black Liquor	24 x 19	64,300
Boilout Tank	21 % Black Liquor	20 x 35	82,200
Davison Terminal Storage	50 % Black Liquor	134 x 40	4,200,000
Evaporator Soap Storage	Liquor and Soap	25 x 30	110,100
No. 1 Evaporator Desoaping Tank	Liquor and Soap	30 x 15	79,300
No. 2 Evaporator Desoaping Tank	Liquor and Soap	30 x 15	79,300
BSW Soap Skimmer Tank	Liquor and Soap	26 x 30	119,080
BSW Soap Collection Tank	Liquor and Soap	12 x 10	8455
Digester Soap Collection - Primary	Liquor and Soap	20 x 15	35,231
Digester Soap Collection - Secondary	Liquor and Soap	12 x 15	12,683
Digester Gas-Off Liquor Tank	Black Liquor	30 x 28	147,969
BSW Hot Water Tank	Liquor Condensate	25 x 25	91,793
BSW Foam Tank	Black Liquor	26 x 30	119,080
1-A Service Tank	Weak Liquor	26 x 30	119,080
2-A Service Tank	Weak Liquor	26 x 30	119,080
3-A Service Tank	Weak Liquor	26 x 30	119,080
1-B Service Tank	Weak Liquor	45 x 24	285,369
2-B Service Tank	Weak Liquor	34 x 30	203,634
3-B Service Tank	Black Liquor	37 x 24	192,924
4-B Service Tank	Black Liquor	40 x 24	225,477
1-C Service Tank	Weak Liquor	34 x 30	203,634
2-C Service Tank	Weak Liquor	34 x 30	203,634
3-C Service Tank	Black Liquor	30 x 30	153,298
4-C Service Tank	Black Liquor	40 x 24	225,477

Tank Name	Contents	Size D(ft) x H(ft)	Volume (gal)
Tank Farm 1	Black Liquor	133 x 30	3,000,000
Tank Farm 2	Black or White Liquor	133 x 30	3,000,000
Tank Farm 3	White Liquor	133 x 30	3,000,000
BSW Hot Water Tank	Evaporator Condensate	25 x 25	91,800
BMP Tank	Kraft Pulping Liquor / Soap / Turpentine		400,000
No. 1 Black Liquor Filter	Black Liquor	5 x 5	N/A
No. 2 Black Liquor Filter	Black Liquor	5 x 5	N/A
No. 3 Black Liquor Filter	Black Liquor	5 x 5	N/A

Specific Conditions

162. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #108, #121, #134, and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
21	Black Liquor Oxidation Tank	VOC	157.5	1913.4*
58	Process Liquor Tanks	VOC	18.4	1913.4*

* Plantwide Applicability Limitation

163. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #108, #121, #134, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
21	Black Liquor Oxidation Tank	TRS Acetone 1,1,2-Trichloroethane 1,2,4-Trichlorobenzene 1,2-Dichloroethane 1,3-Butadiene Acetaldehyde	50.2 2.6 0.01 0.07 0.01 0.01 5.53	833.4* 11.2 0.04 0.28 0.01 0.01 24.3

SN	Description	Pollutant	lb/hr	tpy
		Acetophenone	0.08	0.32
		Acrolein	0.01	0.03
		Benzene	0.01	0.03
		Carbon Disulfide	0.41	1.77
		Carbon Tetrachloride	0.06	0.23
		Carbonyl Sulfide	0.44	1.89
		Chloromethane	0.08	0.35
		Chloroform	0.01	0.01
		Cresol	0.12	0.49
		Cumene	0.24	1.05
		Formaldehyde	0.12	0.52
		Hexachloroethane	0.48	2.10
		Hexane	0.02	0.09
		Methanol	40.0	175.0
		Methyl Isobutyl Ketone	0.08	0.35
		Methylene Chloride	0.05	0.22
		Naphthalene	0.66	2.87
		Phenol	0.10	0.42
		Propionaldehyde	0.28	1.19
		Styrene	0.01	0.03
		Toluene	0.10	0.42
		Xylene	0.13	0.57
58	Process Liquor Tanks	TRS	9.0	833.4*
		Acetone	0.8	3.2
		1,1,2-Trichloroethane	0.01	0.02
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.02
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.32	1.37
		Acetophenone	0.07	0.29
		Acrolein	3.11E-03	1.37E-02
		Benzene	0.01	0.01
		Biphenyl	0.01	0.01
		Carbon Disulfide	0.21	0.92
		Carbon Tetrachloride	0.01	0.01
		Carbonyl Sulfide	0.11	0.48
		Chloroform	0.14	0.59
		Cresol	0.08	0.31
		Cumene	0.02	0.07
		Formaldehyde	0.02	0.05
		Hexane	0.01	0.01
		Methanol	4.70	20.2
		Methyl Isobutyl Ketone	0.02	0.08

SN	Description	Pollutant	lb/hr	tpy
		Methylene Chloride	0.01	0.02
		Naphthalene	0.01	0.01
		Phenol	0.31	1.35
		Propionaldehyde	0.06	0.23
		Styrene	0.01	0.02
		Toluene	0.02	0.08
		Xylene	0.01	0.01

* Plantwide Applicability Limitation

SN-09 - No. 1 Lime Kiln

Source Description

The No. 1 Lime Kiln is equipped with a wet venturi scrubber. The heat input capacity of the No. 1 Lime Kiln is 70 MMBtu per hour. The No. 1 Lime Kiln is associated with the original mill and is not subject to NSPS Subpart BB but is subject to 40 CFR Part 63, Subpart MM which had a compliance date of March 12, 2005. The requirements of Subpart MM are outlined in Plantwide Conditions #**15** through #**33**.

Fuels burned in the No. 1 Lime Kiln include natural gas, petroleum coke, and fuel oil (including No. 6, 5, 4, and 2). All non-condensable gases and low volume high concentration gases are routed to efficient incineration in the lime kilns. The digesters, blow heat evaporators, and multiple effect evaporators are all vented to the NCG/LVHC gas control system. The NCGs/LVHC gases pass through a packed column scrubber before being burned in either lime kiln.

Specific Conditions

164. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #169 through #177 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-09	No. 1 Lime Kiln	PM_{10} SO_2 NO_X CO VOC Lead	14.2 26.9 40.2 10.8 6.7 0.01	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

165. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #168 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501, §19.801, §19.901 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-09	No. 1 Lime Kiln	TRS	8.1	833.4*
		40 ppm measured as H_2S on a dry basis and on a 12-hr average, corrected to 10% volume oxygen		

* Plantwide Applicability Limitation

166. The permittee shall not cause to be discharged to the atmosphere from the No. 1 Lime Kiln gases that exhibit an opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #**21**, #**23**, and #**24**. [Regulation 19, §19.503, 40 CFR Part 52 Subpart E, and 40 CFR Part 63 Subpart MM]

167. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #169 through #174, #177, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-09	No. 1 Lime Kiln	PM	14.2	1143.8*
		Acetone	3.8	16.8[1]
		1,1,2-Trichloroethane	0.01	0.02
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.07	0.27
		Acetophenone	0.06	0.23
		Acrolein	5.16E-03	2.26E-02
		Benzene	0.01	0.04
		Biphenyl	0.01	0.02
		Carbon disulfide	0.01	0.02
		Carbon tetrachloride	0.02	0.07
		Carbonyl Sulfide	0.04	0.17
		Chlorine	0.08	0.32
		Chloroform	0.01	0.01
		Chloromethane	0.02	0.08
		Cresol	0.14	0.59
		Cumene	0.02	0.07
		Formaldehyde	0.08	0.32
		Hexachloroethane	0.10	0.42
		Hexane	0.13	0.55
		Iodomethane	0.01	0.01
		Methanol	4.57	20.0[1]
		Methyl Isobutyl Ketone	0.01	0.02
		Methylene Chloride	0.01	0.01
		Naphthalene	0.13	0.54
		Phenol	0.09	0.37
		Propionaldehyde	0.05	0.21
		Styrene	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
		Toluene	0.01	0.04
		Xylene	0.01	0.04
		Arsenic	6.43E-04	2.82E-03
		Beryllium	3.25E-04	3.13E-04
		Cadmium	2.41E-04	1.06E-03
		Cobalt	0.01	0.02
		Manganese	0.01	0.03
		Mercury	3.07E-04	3.98E-04
		Nickel	0.05	0.18
		Phosphorus	0.04	0.14
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01

[1] Total for SN-09 and SN-10

* Plantwide Applicability Limitation

168. The permittee shall operate and maintain a CEMS which records the TRS concentration of gases leaving the No. 1 Lime Kiln. The TRS monitor shall be operated in accordance with the requirements of 40 CFR §60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions. A copy of the Department Continuous Emission Monitoring Systems Conditions is provided in Appendix A. A copy of §19.801 et seq. of Regulation 19 is provided in Appendix B. [Regulation 19, §19.703 and §19.801, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

169. The permittee may fire natural gas, petroleum coke, or fuel oil (including No. 6, 5, 4, and 2) in the No. 1 Lime Kiln. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

170. The permittee shall not use in excess of 82,125 tons of lime (CaO) per twelve consecutive months at the No. 1 Lime Kiln. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

171. The permittee shall not combust in excess of 7,800 tons of petroleum coke per twelve consecutive months at the No. 1 Lime Kiln. [Regulation 19, §19.705, regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

172. All non-condensable gases shall be routed to efficient incineration at the No. 1 Lime Kiln or the No. 2 Lime Kiln. The non-condensable gases shall be incinerated at 1,200°F for at least 0.5 seconds. [Regulation 19, §19.801, Regulation 19, §19.901, 40 CFR Part 52 Subpart E, and 40 CFR Part 60 Subpart BB]

173. Any owner or operator subject to the provisions of NSPS Subpart BB (affected source Digesters (SN-51)) shall report semiannually periods of excess emissions. For emissions

from any digester system periods of excess emissions are all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 650°C (1200°F), where the provisions of §60.283(a)(1)(iii) apply to the digester system. [Regulation 19, §19.304 and 40 CFR §60.284(d)(3)(ii)]

174. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #169 through #171. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month's individual data for the annual lime usage and petroleum coke combustion limits shall by submitted in accordance with General Provision #7. The type of fuel combusted during the reporting period shall also be submitted in accordance with General Provision #7. [The compliance demonstration for efficient incineration under the Cluster Rule will also be sufficient for compliance demonstration for the requirements in Specific Condition #172. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

175. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

176. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall be verified by testing or by vendors' guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

177. The permittee shall test emissions for the listed pollutants from the No. 1 Lime Kiln once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202

Pollutant	EPA Reference Test Method
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

178. If multiple fuels have been burned at the facility (such as natural gas, petroleum coke, and/or fuel oil) since the last test, then the facility shall perform the testing required by Specific Condition #177 while burning that fuel or combination of fuels used since the last test which generates the highest potential emissions. However, if the permittee tests using a fuel which does not generate the highest potential emissions, the facility will be limited to that fuel or a permitted fuel with lower potential emissions. If after the test, the permittee desires to burn a fuel with higher potential emissions than the fuel most recently tested, the permittee must test the higher emitting fuel within 60 days of beginning to burn the fuel. [§19.702 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

179. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 1 Lime Kiln, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

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180. The permittee shall introduce the HAP emission stream (LVHC gas stream) from the closed-vent system into the flame zone of the Lime Kiln No. 1 (SN-09) and Lime Kiln No. 2 (SN-10) or with the primary fuel. [40 CFR §63.443(d)(4) and Regulation 19, §19.304]

181. Periods of excess emissions shall not be a violation provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent. [40 CFR §63.443(e)(1) and Regulation 19, §19.304]

SN-10 - No. 2 Lime Kiln

Source Description

The No. 2 Lime Kiln is equipped with a wet venturi scrubber. The heat input capacity of the No. 2 Lime Kiln is 70 MMBtu per hour. The No. 2 Lime Kiln was added in 1959 and is not subject to NSPS Subpart BB but is subject to 40 CFR Part 63, Subpart MM and must comply by March 12, 2005. The requirements of Subpart MM are outlined in Plantwide Conditions #**15** through #**33**.

Fuels burned in the No. 2 Lime Kiln include natural gas, petroleum coke, and fuel oil (including Nos. 6, 5, 4, and 2). All non-condensable gases (NCGs) and low volume high concentration (LVHC) gases are routed to efficient incineration in the lime kilns. The digesters, blow heat evaporators, and multiple effect evaporators are all vented to the NCG/LVHC gas control system. The NCGs/LVHC gases pass through a packed column scrubber before being burned in either lime kiln.

Specific Conditions

182. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #187 through #195 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-10	No. 2 Lime Kiln	PM_{10} SO_2 NO_X CO VOC Lead	17.7 26.9 40.2 10.8 6.7 0.01	836.1* 392.4* 1458.1* 2041.1* 1913.4* 0.69*

* Plantwide Applicability Limitation

183. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #186 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501, §19.801, §19.901, and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-10	No. 2 Lime Kiln	TRS	8.1	833.4*
		40 ppm measured as H_2S on a dry basis and on a 12-hr average, corrected to 10% volume oxygen		

* Plantwide Applicability Limitation

184. The permittee shall not cause to be discharged to the atmosphere from the No. 2 Lime Kiln gases that exhibit an opacity greater than 40%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #**21**, #**23**, and #**24**. [Regulation 19, §19.503, 40 CFR Part 52 Subpart E, and 40 CFR Part 63 Subpart MM]

185. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #187 through #192, #195, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-10	No. 2 Lime Kiln	PM	17.7	1143.8*
		Acetone	3.8	16.8[1]
		1,1,2-Trichloroethane	0.01	0.02
		1,2,4-Trichlorobenzene	0.01	0.01
		1,2-Dichloroethane	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.07	0.27
		Acetophenone	0.06	0.23
		Acrolein	5.16E-03	2.26E-02
		Benzene	0.01	0.04
		Biphenyl	0.01	0.02
		Carbon Disulfide	0.01	0.02
		Carbon Tetrachloride	0.02	0.07
		Carbonyl Sulfide	0.04	0.17
		Chlorine	0.08	0.32
		Chloroform	0.01	0.01
		Chloromethane	0.02	0.08
		Cresol	0.14	0.59
		Cumene	0.02	0.07
		Formaldehyde	0.08	0.32
		Hexachloroethane	0.10	0.42
		Hexane	0.13	0.55
		Iodomethane	0.01	0.01
		Methanol	4.57	20.0[1]
		Methyl Isobutyl Ketone	0.01	0.02
		Methylene Chloride	0.01	0.01
		Naphthalene	0.13	0.54
		Phenol	0.09	0.37
		Propionaldehyde	0.05	0.21
		Styrene	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
		Toluene	0.01	0.04
		Xylene	0.01	0.04
		Arsenic	6.43E-04	2.82E-03
		Beryllium	3.25E-04	3.13E-04
		Cadmium	2.41E-04	1.06E-03
		Cobalt	0.01	0.02
		Manganese	0.01	0.03
		Mercury	3.07E-04	3.98E-04
		Nickel	0.05	0.18
		Phosphorus	0.04	0.14
		Selenium	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01

[1] Total for SN-09 and SN-10

* Plantwide Applicability Limitation

186. The permittee shall operate and maintain a CEMS which records the TRS concentration of gases leaving the No. 2 Lime Kiln. The TRS monitor shall be operated in accordance with the requirements of 40 CFR 60.284 (date of installation not withstanding) and the Department Continuous Emission Monitoring Systems Conditions. A copy of the Department Continuous Emission Monitoring Systems Conditions is provided in Appendix A. A copy of §19.8 of Regulation 19 is provided in Appendix B. [Regulation 19, §19.703 and §19.801 and 40 CFR Part 52 Subpart E]

187. The permittee may fire natural gas, petroleum coke or fuel oil (including No. 6, 5, 4, and 2) in the No. 2 Lime Kiln. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

188. The permittee shall not use in excess of 82,125 tons of lime (CaO) per twelve consecutive months at the No. 2 Lime Kiln. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

189. The permittee shall not combust in excess of 7,800 tons of petroleum coke per twelve consecutive months at the No. 2 Lime Kiln. [Regulation 19, §19.705, regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

190. All non-condensable gases shall be routed to efficient incineration at the No. 1 Lime Kiln or the No. 2 Lime Kiln. The non-condensable gases shall be incinerated at 1,200°F for at least 0.5 seconds. [Regulation 19, §19.801, Regulation 19, §19.901 and 40 CFR Part 52 Subpart E]

191. Any owner or operator subject to the provisions of NSPS Subpart BB (affected source Digesters (SN-51)) shall report semiannually periods of excess emissions. For emissions from any digester system periods of excess emissions are all periods in excess of 5

minutes and their duration during which the combustion temperature at the point of incineration is less than 650^{o}C (1200^{o}F), where the provisions of §60.283(a)(1)(iii) apply to the digester system. [Regulation 19,§19.304 and 40 CFR §60.284(d)(3)(ii)]

192. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #187 through #189. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month's individual data for the annual lime usage and petroleum coke combustion limits shall by submitted in accordance with General Provision #7. The type of fuel combusted during the reporting period shall also be submitted in accordance with General Provision #7. The compliance demonstration for efficient incineration under the Cluster Rule will also be sufficient for compliance demonstration for the requirements in Specific Condition #190. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

193. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall not exceed 1.0% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

194. The sulfur content of the fuel oil (including No. 6, 5, 4, and 2) shall be verified by testing or by vendors' guarantees (some vendor guarantees may cover a range of shipments). The permittee shall maintain a record of each fuel oil shipment and the associated sulfur content. This record shall be updated with each shipment, kept on site, shall be made available to Department personnel upon request and may be used by the Department for enforcement purposes. This report shall be submitted to the Department in accordance with General Provision #7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

195. The permittee shall test emissions for the listed pollutants from the No. 2 Lime Kiln once every five years using the listed test method or a method approved by the Department. Testing shall be performed in accordance with Plantwide Condition #3. The initial test shall be performed within 180 days after the issuance of permit #0580-AOP-R11 unless the Department determines that testing is not required. Subsequent testing shall be performed within five years of the initial testing date. During the test, the permittee shall operate the plant within 10 percent of the rated throughput capacity. If 90 percent of the rated throughout capacity cannot be achieved, the permittee shall be limited to 10 percent above the actual tested throughput. [Regulation 19, §19.702 and 40 CFR Part 52 Subpart E]

Pollutant	EPA Reference Test Method
PM	5 and 202
PM_{10}	201A or 5 and 202

Pollutant	EPA Reference Test Method
$PM_{2.5}$	202
NOx	7E
CO	10
SO_2	6C
VOC	25A

196. If multiple fuels have been burned at the facility (such as natural gas, petroleum coke, and/or fuel oil) since the last test, then the facility shall perform the testing required by Specific Condition #195 while burning that fuel or combination of fuels used since the last test which generates the highest potential emissions. However, if the permittee tests using a fuel which does not generate the highest potential emissions, the facility will be limited to that fuel or a permitted fuel with lower potential emissions. If after the test, the permittee desires to burn a fuel with higher potential emissions than the fuel most recently tested, the permittee must test the higher emitting fuel within 60 days of beginning to burn the fuel. [§19.702 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

197. All testing shall be used to verify compliance with the short term emission rates and validation of emission factors used in this permit. In the case of emission factor validation, the test results shall be used to compare to the emission factor range used in the permit application for permit #0580-AOP-R11. In the case where three or more site specific tests exist for the No. 2 Lime Kiln, the permittee shall submit an emission factor validation approval that evaluates the site specific tests to establish, if possible, a more defined emission factor for the source. This evaluation should consider the statistical number, range and values of the tests alone or in conjunction with other emission data. This report shall be submitted within 120 days after the issuance of permit #0580-AOP-R11. The Department may waive the initial test due within 180 days based on this submittal. [Regulation 19, §19.304 and 40 CFR §52.21(aa)(12)(vi)]

NESHAP Subpart S Standard

198. The permittee shall introduce the HAP emission stream (LVHC gas stream) from the closed-vent system into the flame zone of the Lime Kiln No. 1 (SN-09) and Lime Kiln No. 2 (SN-10) or with the primary fuel. [40 CFR §63.443(d)(4) and Regulation 19, §19.304]

199. Periods of excess emissions shall not be a violation provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed one percent. [40 CFR §63.443(e)(1) and Regulation 19, §19.304]

SN-11 and SN-20 - Slaker and Lime Handling Source

Source Description

Green liquor (primarily sodium sulfide and sodium carbonate) from the smelt dissolving tanks is sent to the green liquor clarifier, where the dregs are removed from the green liquor. The green liquor is sent to storage tanks prior to being mixed in the Slaker (SN-11). The mixture is then sent to four causticizers in series, where white liquor (sodium sulfide and sodium hydroxide) and lime mud are formed.

The white liquor and lime mud slurry is sent to the white liquor clarifier, where the lime mud is settled from the white liquor. Clarified white liquor is stored before being sent to the digesters. The lime mud slurry is conditioned, washed, and thickened before being sent to the lime recovery area to produce lime, which is then added to the Slaker. Weak wash from the lime mud is then used in the smelt dissolving tanks.

Burned lime from the lime kilns (SN-09 and SN-10) is conveyed to two silos for storage prior to being added to the Slaker. The mill also purchases fresh lime, which is conveyed from trucks to a silo. Fresh lime is also added at the Slaker. The dust from the truck unloading, the fresh lime silo, the reburned lime silo, and the closed conveying to the kilns is controlled with the Lime Handling Dust scrubber (SN-20). The Slaker is equipped with a gravity scrubber. In 1987, this Slaker replaced the two Slakers from the original mill.

Specific Conditions

200. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #204 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
11	Slaker	PM_{10} VOC	0.3 3.3	836.1* 1913.4*
20	Lime Handling Source	PM_{10}	0.4	836.1*

* Plantwide Applicability Limitation

201. The permittee shall not cause to be discharged to the atmosphere from the Slaker gases which exhibit opacity greater than 20%. The permittee shall not cause to be discharged to the atmosphere from the Lime Handling Source gases which exhibit opacity greater than 20%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR Part 60 Appendix A. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #202. [Regulation 19, §19.503 and 40 CFR Part 52 Subpart E]

202. The scrubbers shall be kept in good working condition at all times and shall meet the operating conditions shown in the following table. The scrubber liquor flow rate and the water temperature across SN-11 shall be measured daily. The scrubber flow rate and the gas pressure drop across SN-20 shall be measured daily. The results shall be kept on site and be available to Department personnel upon request. [Regulation 19, §19.303, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Control Equipment	Parameter	Units	Minimum Operating Limits
11	scrubber	liquor (water) flow rate water temperature <98^{o}F	gal/min	>35
		liquor (water) flow rate water temperature <105^{o}F	gal/min	>45
20	scrubber	liquor (weak wash) flow rate	gal/min	>170
		gas pressure drop across unit	in H_2O	>3.9

203. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #204 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
11	Slaker	PM	0.3	1143.8*
		TRS	0.03	833.4*
		Acetone	0.3	1.0
		Ammonia	12.6	55.4
		1,2-Dichloroethane	0.01	0.01
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Acetaldehyde	0.50	2.16
		Acrolein	1.19E-03	5.19E-03
		Benzene	0.01	0.01
		Carbon Disulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.04
		Chloroform	0.01	0.03
		Cumene	0.01	0.01
		Formaldehyde	0.02	0.06
		Hexane	0.01	0.01
		Methanol	2.35	10.3
		Methyl Isobutyl Ketone	0.01	0.01
		Methylene Chloride	0.12	0.53

SN	Description	Pollutant	lb/hr	tpy
		Naphthalene Phenol Propionaldehyde Styrene Toluene Xylene	0.01 0.03 0.01 0.01 0.01 0.01	0.01 0.11 0.03 0.01 0.02 0.01
20	Lime Handling Source	PM	0.4	1143.8*

* Plantwide Applicability Limitation

204. The permittee shall not use in excess of 205,130 tons of lime (reburned and fresh) per twelve consecutive months. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

205. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #204. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month's individual data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

SN-48 and SN-59 - The Caustic Area

Source Description

Various causticizing area emissions have been bubbled together (SN-48 and SN-59). Sources associated with the permitted emissions under the bubble include three tanks associated with green liquor, six tanks associated with white liquor, two clarifiers, a white liquor sump, four causticizers, and a dregs filter. The following table lists the existing tanks at the Pine Bluff Mill associated with the causticizing area. No pollution control devices are associated with these sources.

Tank Name	Contents	Size D(ft) x H(ft)	Volume (gal)
No. 1 Green Liquor Clarifier	Green Liquor	65 x 30	744,251
No. 2 Green Liquor Clarifier	Green Liquor	45 x 30	356,712
Green Liquor Storage Tank	Green Liquor	45 x 24	285,369
New White Liquor Clarifier	White Liquor	80 x 18	676,431
Old No. 1 White Liquor Clarifier	White Liquor	40 x 24	225,477
No. 1 White Liquor Storage	White Liquor	30 x 24	126,831
No. 2 White Liquor Storage	White Liquor	30 x 24	126,831
No. 3 White Liquor Storage	White Liquor	30 x 24	126,831
No. 4 White Liquor Storage	White Liquor	30 x 24	126,831
New Sulfide Storage Tank	Sodium Sulfide	50 x 24	352,308
Old Sulfide Storage Tank	Sodium Sulfide	26 x 24	95,264
Weak Wash Storage Tank	Weak Wash	30 x 24	126,831
Milk of Lime Storage Tank	Milk of Lime	20 x 20	46,974
BSW Tank No. 4*	Defoamer	12 x 18	15,220
GWM Tank No. 27	50 % Caustic	12 x 15.5	13,106
GWM Tank No. 30	12 % Caustic	12 x 15.5	13,106
GWM Tank No. 31	Sodium Silicate	12 x 15	12,683
GWM Tank No. 32	Alum	6 x 8	1,691
White Liquor	Kraft Pulping Liquor	133 x 30	3,000,000
Green Liquor Blend Tank	Green Liquor	40 x 20	188,000

Tank Name	Contents	Size D(ft) x H(ft)	Volume (gal)
White Liquor Oxidation	White Liquor	26 x 12	22,000

* Hydrotreated petroleum distillate

Specific Conditions

206. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #204 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-48 and SN-59	The Caustic Area	VOC	4.8	1913.4*

* Plantwide Applicability Limitation

207. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #204 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-48 and SN-59	The Caustic Area	TRS	5.4	833.4*
		Acetone	0.2	0.6
		1,2-Dichloroethane	0.01	0.01
		1,2-Dichloroethylene	0.01	2.05E-02
		1,1,2-Trichloroethane	0.01	0.01
		1,2,4-Trichlorobenzene	0.01	0.01
		Acetaldehyde	0.05	1.95E-01
		Acrolein	3.73E-03	1.63E-02
		Benzene	0.01	0.01
		Carbon Tetrachloride	0.02	0.07
		Chloroform	0.02	0.05
		Formaldehyde	0.01	0.03
		Methanol	4.01	17.6
		Methylene Chloride	0.01	0.03
		Methyl Isobutyl Ketone	0.01	0.01
		Styrene	0.01	0.02
		Toluene	0.01	0.01
		Xylene	0.01	0.03

* Plantwide Applicability Limitation

SN-49 - Condensate Collection and Treatment

Source Description

Process wastewater is collected and routed to the wastewater treatment plant through closed sewers, trenches and/or ditches. All wastewater is first sent through primary clarification. The primary clarifier allows solids to settle prior to secondary treatment. The effluent from the primary clarifier is sent to the secondary treatment system through a long ditch. The secondary treatment system includes Aerated Stabilization Basin #1, Aerated Stabilization Basin #2, and the Wetlands System. Flow from the secondary treatment system is sent to the polishing/settling pond prior to being discharged to the Arkansas River. Sludge removed from the clarifier is burned, landfilled, land applied or beneficially used.

The pulping condensate streams from some, but not necessarily all, of the following equipment will be collected in a hard piping system and routed to the Segregated Zone of the wastewater treatment (WWT) system for biological treatment:

- Blow Heat Accumulator Digester Blow Gas Purge Condensate
- Blow Heat Accumulator Pre-Evaporator Foul Condensate
- Blow Heat Accumulator Pre-Evaporator Combined Condensate
- Turpentine Decanter Underflow Condensate
- No. 1 Multiple Effect Evaporator Surface Condenser Condensate
- No. 2 Multiple Effect Evaporator Surface Condenser Condensate
- No. 1 Multiple Effect Evaporator Feed Effects or Combined Condensate
- No. 2 Multiple Effect Evaporator Feed Effects or Combined Condensate
- Non-condensable Gas System (NCG) Drain Condensates

Foul condensate from the Turpentine Decanter and the NCG Drains in the caustic plant/lime kiln area will be collected in the Turpentine Decanter Underflow Surge Tank. This condensate will be pumped to the Main Foul Condensate Collection Tank. Pre-Evaporator Foul Condensate Streams will be collected in the Pre-Evaporator Foul Condensate surge tank and pumped to the Main Foul Condensate Collection Tank. Pre-Evaporator Combined Condensates will be collected in the Pre-Evaporator Combined Condensate surge tank and pumped to the Main Foul Condensate Collection Tank. The Blow Heat Accumulator Purge gravity flows to the Main Foul Condensate Collection Tank via three potential exit points off the Accumulator Tank and its recirculation lines. The Blow Heat Accumulator Purge may require a pump occasionally if it is sourced from the lower part of the Accumulator Tank. The remaining streams will be pumped directly to the Main Foul Condensate Collection Tank. The foul condensate from the collection tanks will be pumped to the wastewater treatment system (SN-49) for treatment. Emissions from the collection tanks will be collected and vented to the LVHC system.

Specific Conditions

208. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #210 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-49	Condensate Collection and Treatment	VOC	497.0	1913.4*

* Plantwide Applicability Limitation

209. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #210 and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-49	Condensate Collection and Treatment	TRS	157.8	833.4*
		Acetone	5.2	14.2
		Acetaldehyde	5.26	17.8
		Acrolein	6.73E-02	1.87E-01
		Benzene	0.01	0.03
		Carbon Disulfide	0.30	0.81
		Chloroform	1.13	3.12
		Cresol	0.01	0.01
		Chloromethane	0.01	0.01
		Formaldehyde	0.05	0.14
		Methanol	484	1,331
		Methyl Isobutyl Ketone	0.04	0.11
		Methylene Chloride	0.04	0.09
		Naphthalene	0.09	0.24
		Pentachlorophenol	0.54	1.48
		Phenol	0.01	0.01
		Propionaldehyde	1.45	3.98
		Toluene	0.03	0.08
		2,4,5-Trichlorophenol	0.12	0.32

* Plantwide Applicability Limitation

210. The permittee shall not process in excess of 2.5 million gallons of wastewater per hour or 13,870 million gallons of wastewater per twelve consecutive months at the Mill’s WWT

System. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

211. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Condition #210. The records shall be updated on a daily basis for the hourly limit and on a monthly basis for the annual limit. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve-month total and each month's individual data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

NESHAP Subpart S Standard

212. The permittee shall collect the pulping condensate streams from some, but not necessarily all, of the following equipment to meet the condensate collection and treatment requirements under Phase I of 40 CFR 63, Subpart S (MACT I, Phase 1) and the HAP emission reduction requirements under MACT I, Phase 2 (Clean Condensate Alternative). Condensates shall be conveyed in a closed collection system, routed via a hard piping system to the Segregated Zone of the wastewater treatment system for biological treatment, and discharged below the liquid surface of the Segregated Zone. [40 CFR §63.446(b), §63.446(c)(3) and Regulation 19, §19.304]:

- Blow Heat Accumulator Digester Blow Gas Purge Condensate
- Blow Heat Accumulator Pre-Evaporator Foul Condensate
- Blow Heat Accumulator Pre-Evaporator Combined Condensate
- Turpentine Decanter Underflow Condensate
- No. 1 Multiple Effect Evaporator Surface Condenser Condensate
- No. 2 Multiple Effect Evaporator Surface Condenser Condensate
- No. 1 Multiple Effect Evaporator Feed Effects or Combined Condensate
- No. 2 Multiple Effect Evaporator Feed Effects or Combined Condensate
- Noncondensable Gas Systems (NCG) Drain Condensates

213. The permittee shall collect the pulping process condensates from the equipment systems listed in Specific Condition #212 that in total contain 11.1 lb of HAP (as methanol) per oven dried ton of pulp (ODTP) on a 15-day rolling average basis to meet MACT I, Phase 1 requirements. [40 CFR §63.446(c)(3) and Regulation 19, §19.304]

214. The permittee shall treat the pulping process condensates from the equipment systems listed in Specific Condition #212 to reduce or destroy 10.2 lb or more of total HAP (as methanol) per ton of ODTP to meet MACT I, Phase 1 requirements. [40 CFR §63.446(e)(5) and Regulation 19, §19.304]

215. The permittee shall demonstrate compliance with the MACT I, Phase 2 requirements in 40 CFR 63.440(d)(1) by utilizing the Clean Condensate Alternative (CCA). The permittee shall treat the pulping process condensates from the equipment systems listed

in Specific Condition #212 to reduce 0.34 pounds of total HAP (as methanol) per ton of ODTP to meet MACT I Phase 2 CCA requirements. Compliance with this specific condition shall be achieved no later than April 16, 2007. [40 CFR §63.447(e) and (f) and Regulation 19, §19.304]

216. The permittee shall use the following individual parts of the overall facility's WWT System (instead of the total of all equipment systems) within the CCA affected source to determine emissions and demonstrate HAP (as methanol) mass reductions equal to or greater than the HAP reductions that would have been achieved through compliance with §63.443(a)(1)(ii) through (a)(1)(v): [40 CFR §63.447(f) and Regulation 19, §19.304]

a. Transport and Handling System
    i. Inlet Ditch to the Clarifier;
    ii. Clarifier;
    iii. Outlet Ditch from the Clarifier to the WWT System
b. WWT System
    i. Aerated Stabilization Basin #1 Zones 1, 2 & 3
    ii. Aerated Stabilization Basin #2 (single zone)
c. Post CCA Implementation
    i. Segregated Zone
    ii. Aerated Stabilization Basin #1 Zone 1, 2 & 3
    iii. Aerated Stabilization Basin #2 (single zone)

217. The permittee shall determine the baseline HAP emissions for the equipment systems listed in Specific Condition #216. Additionally, the permittee shall determine the HAP emission reductions resulting from CCA implementation. The permittee shall determine HAP (as methanol) mass emissions reductions using the following calculation methodology: [40 CFR §63.447(e) and (f) and Regulation 19, §19.304]

a. Determine baseline emissions from the wastewater Transport and Handling System through the use of site-specific data and Water9 modeling analysis resulting in a percent of HAP volatilized at the Transport and Handling System. Based on testing conducted to determine baseline conditions, a HAP volatilization rate of 16.8 % will be used for compliance demonstration purposes to represent the first portion of the baseline pre-CCA emissions ($TH_{\%\ vol}$).

b. Determine baseline emissions from the CCA applicable portion of the WWT System through the use of site-specific data and 40 CFR 63, Appendix C calculations resulting in a percent of HAP volatilized at the WWT System, which is comprised of atmospheric emissions from the following system components:

    - Aerated Stabilization Basin #1, Zone 1 ($ASB1_{Z1,\ \%vol}$)
    - Aerated Stabilization Basin #1, Zones 2 & 3 ($ASB1_{Z2\&3,\ \%vol}$)
    - Aerated Stabilization Basin #2 ($ASB2_{\%vol}$)

Based on testing conducted to determine baseline conditions, HAP volatilization rates from the above listed system components and the biological degradation activity of Aerated Stabilization Basin #1, Zone 1 ($ASB1_{Fbio}$)and Aerated Stabilization Basin 1, Zones 2 & 3 will be used for compliance demonstration purposes to represent the second portion of the baseline pre-CCA emissions ($WWT_{\% vol}$), as follows:

- $ASB1_{Z1, \%vol} = 7.1$
- $ASB1_{Z2\text{-}Z3, \%vol} = 10.9$
- $ASB2_{\%vol} = 6.0$
- $ASB1_{Fbio} = 32.2$
- $ASB1_{Z2\text{-}Z3, Fbio} = 80.6$

c. To characterize condensate collection using CCA, sample data will be obtained in accordance with the HAP collection requirements provided in Specific Condition #225 c.iii ($CCA_{collection}$).

d. The baseline percent of HAPs volatilized at the Transport and Handling System will be applied to the amount of HAP collected to determine the air emissions that would have occurred during transport and handling ($TH_{emissions}$).

$$TH_{emissions} = TH_{\% vol} \times CCA_{collection}$$

e. The baseline percent of HAPs volatilized at the WWT System will then be applied to the remaining amount of HAP collected to determine air emissions that would have occurred at the WWT System ($WWT_{emissions}$). WWT emission calculations are laddered through the stages of the treatment system sequentially, as follows:

$ASB1_{Z1,baseline}$ is the MeOH volatilization to atmosphere from the Aerated Stabilization Basin 1, Zone 1.

$$ASB1_{Z1,baseline} = ASB1_{Z1,\% vol} \times (CCA_{collection} - TH_{emissions})$$

$ASB1_{Z1,baseline\ out}$ is the MeOH load in the liquid stream from Aerated Stabilization Basin 1, Zone 1 to Aerated Stabilization Basin 1, Zones 2 and 3.

$$ASB1_{Z1,baseline\ out} = [1- (ASB1_{Z1,\% vol} + ASB1_{Z1,Fbio})] \times (CCA_{collection} - TH_{emissions})$$

$ASB1_{Z2\text{-}Z3,baseline}$ is the MeOH volatilization to atmosphere from Aerated Stabilization Basin 1, Zones 2 and 3.

$$ASB1_{Z2\text{-}Z3,baseline} = ASB1_{Z2\text{-}Z3,\% vol} \times ASB1_{Z1,baseline\ out}$$

$ASB1_{Z2\text{-}Z3,baseline\ out}$ is the MeOH load in the liquid stream from Aerated Stabilization Basin 1, Zones 2 and 3 to Aerated Stabilization Basin 2.

$$ASB1_{Z2\text{-}Z3,\text{baseline out}} = [1 - (ASB1_{Z2\text{-}Z3,\%\text{ vol}} + ASB1_{Z2\text{-}Z3,\text{Fbio}})] \times (ASB1_{Z1,\text{baseline out}})$$

$ASB2_{baseline}$ is the MeOH volatilization to the atmosphere from Aerated Stabilization Basin 2.

$$ASB2_{\text{baseline}} = ASB2_{\%\text{ vol}} \times ASB1_{Z2\text{-}Z3,\text{baseline out}}$$

$WWT_{emissions}$ is the MeOH volatilization to the atmosphere from Aerated Stabilization Basin 1, Zones 1, 2 and 3 and Aerated Stabilization Basin 2.

$$WWT_{\text{emissions}} = ASB1_{Z1,\text{ baseline}} + ASB1_{Z2\text{-}Z3,\text{baseline}} + ASB2_{\text{baseline}}$$

f. The summation of the emissions provides total wastewater system emissions that would have occurred ($WWT_{baseline}$) in the baseline condition.

$$WWT_{\text{baseline}} = WWT_{\text{emissions}} + TH_{\text{emissions}}$$

g. Post-CCA sampling performed at the Segregated Zone in conjunction with 40 CFR 63, Appendix C calculations were used to determine the amount of volatilization at the Segregated Zone ($ZONE_{\%\ vol}$). This percent volatilized is applied to the amount collected to determine the emissions from the Segregated Zone as a result of CCA ($ZONE_{emissions}$).

$ZONE_{emissions}$ is the MeOH volatilization to the atmosphere from the Segregated Zone.

$$ZONE_{\text{emissions}} = ZONE_{\%\text{ vol}} \times CCA_{\text{collection}}$$

$ZONE_{out}$ is the MeOH load in the liquid stream from the Segregated Zone to Aerated Stabilization Basin 1, Zone 1.

$$ZONE_{\text{out}} = [1 - (ZONE_{\%\text{ vol}} + ZONE_{\text{Fbio}})] * (CCA_{\text{collection}} - ZONE_{\text{emissions}})$$

Emissions due to breakthrough from the Segregated Zone to Aerated Stabilization Basin #1, Zone 1, Aerated Stabilization Basin 1, Zones 2 & 3, and Aerated Stabilization Basin 2 are assumed to be volatized for IPT and continuous monitoring purposes and are added to the emissions from the Segregated Zone to determine total post-CCA WWT System emissions (WWT_{total}).

$$WWT_{\text{total}} = ZONE_{\text{emissions}} + ZONE_{\text{out}}$$

The amount of air emissions from the post-CCA WWT System (Segregated Zone) is subtracted from the amount of air emissions from the baseline WWT System ($WWT_{baseline}$) resulting in the total CCA emission reduction (CCA_{total}).

$$CCA_{total} = WWT_{baseline} – WWT_{total}$$

h. In the event of a low CCA collection failure which results in a failure of the CCA HAP emission reduction requirement of 0.34 lb/ODTP, the permittee may elect to confirm the actual volatilization resulting from the Segregated Zone breakthrough $Zone_{out}$ as it passes through Aerated Stabilization Basin 1, Zone 1, Aerated Stabilization Basin 1, Zones 2 & 3, and Aerated Stabilization Basin 2 and re-calculate the actual WWT_{total} to determine if compliance was achieved during the retest of these systems. The actual emissions from any breakthrough from the Segregated Zone can be calculated as follows:

$ASB1_{Z1, emissions}$ is the MeOH volatilization to the atmosphere from Aerated Stabilization Basin 1, Zone 1, after Segregated Zone treatment.

$$ASB1_{Z1, emissions} = ASB1_{Z1,\% vol} \text{ x } (ZONE_{out})$$

$ASB1_{Z1,out}$ is the MeOH load in the liquid stream from Aerated Stabilization Basin 1, Zone 1 to Aerated Stabilization Basin 1, Zones 2 and 3.

$$ASB1_{Z1, out} = [1- (ASB1_{Z1,\% vol} + ASB1_{Z1,Fbio})]*(ZONE_{out})$$

$ASB1_{Z2-Z3, emissions}$ is the MeOH volatilization to the atmosphere from Aerated Stabilization Basin 1, Zones 2 and 3, after ZONE 1 treatment.

$$ASB1_{Z2-Z3, emissions} = ASB1_{Z2-Z3,\% vol} \text{ x } (ASB1_{Z1,out})$$

$ASB1_{Z2-Z3,out}$ is the MeOH load in the liquid stream from Aerated Stabilization Basin 1, Zones 2 and 3 to Aerated Stabilization Basin 2.

$$ASB1_{Z2-Z3, out} = [1- (ASB1_{Z2-Z3,\% vol} + ASB1_{Z2-Z3,Fbio})]*(ASB1_{Z1,out})$$

$ASB2_{emissions}$ is the MeOH volatilization to the atmosphere from Aerated Stabilization Basin 2, after ZONE 1 treatment.

$$ASB2_{emissions} = ASB2_{\% vol} \text{ x } (ASB1_{Z2-Z3,out})$$

$$WWT_{total} = ZONE_{emissions} + ASB1_{Z1, emissions} + ASB1_{Z2-Z3, emissions} + ASB2_{emissions}$$

Following verification of treatment in Aerated Stabilization 1, Zone 1, Aerated Stabilization Basin 1, Zones 2 & 3, and Aerated Stabilization Basin 2, the amount of air emissions from the WWT System is subtracted from the amount of air emissions from the baseline resulting in the total CCA HAP emission reduction (CCA_{total}).

$$CCA_{total} = + WWT_{baseline} – WWT_{total}$$

Monitoring Requirements

218. The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) for condensate collection to measure and record flow exiting the Main Foul Condensate Collection Tank to demonstrate compliance with MACT I, Phase 1 and CCA requirements. [40 CFR §63.453(a) and (i) and Regulation 19, §19.304]

219. The permittee shall conduct an initial performance test (IPT) to demonstrate compliance with the MACT I, Phase 1 and CCA requirements in Specific Conditions #213, #214, and #215 within 180 days after April 16, 2007. The mass removal test procedures specified in 40 CFR §64.457(c)(1) through (c)(2), along with the following calculation methodologies, shall be used during the IPT to demonstrate compliance with the collection and treatment and emission reduction requirements. [40 CFR §63.457(a), §63.7(b), §63.7(c)(2), §63.8(c)(3), §63.8(e)(2), §63.7(g), and Regulation 19, §19.304]

a. For purposes of demonstrating compliance with the MACT I, Phase 1 collection requirement (Specific Condition #213) during the IPT, the calculation methodology provided in Specific Condition #221(a) shall be used.
b. For purposes of demonstrating compliance with the MACT I, Phase 1 treatment requirement (Specific Condition #214), the calculation methodologies provided in Specific Condition #221(b) shall be used.
c. For purposes of demonstrating compliance with the CCA HAP emission reduction requirement (Specific Condition #215), the calculation methodology in Specific Conditions #217 and #221(c) shall be used.

Before conducting the IPT to demonstrate MACT I, Phase 1 and CCA compliance, or any subsequent performance tests, the permittee shall develop and, if requested by the Administrator and/or the Department, shall submit a site-specific test plan for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance program. The permittee shall notify the Administrator and/or the Department in writing of its intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator and/or Department, upon request, to review and approve the site-specific test plan.

Continuous monitoring systems (CMS) used to demonstrate MACT I, Phase 1 and CCA compliance shall be installed, operational, and the data verified either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. The permittee shall notify the Administrator and/or the Department in writing of the date of the CMS performance evaluation simultaneously with the notification of the performance test date or at least 60 days prior to the date the CMS performance evaluation is scheduled to begin.

The permittee shall report the results of a performance test to the Department before the close of business on the 60th day following the completion of the performance test. A performance test is “completed” when field sample collection is terminated.

220. To establish or reestablish the value for each operating parameter required to be monitored under Specific Conditions #222 and #224, the permittee shall use the following procedures. [40 CFR §63.453(n) and Regulation 19, §19.304]

    a. The operating parameter shall be continuously recorded during the initial performance test or any subsequent performance tests;
    b. Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer’s recommendations;
    c. The permittee shall provide for the Department’s approval the rationale for selecting the monitoring parameters necessary to comply with Specific Conditions #222 and #224; and
    d. The permittee shall provide for the Department’s approval the rationale for the selected operating parameter value, monitoring frequency, and averaging time. The rationale must Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard

221. The permittee shall use the following procedures during IPTs to demonstrate compliance with MACT I, Phase 1 treatment (Specific Condition #214) and CCA HAP emission reduction (Specific Condition #215) requirements. [40 CFR §63.457(a), §63.7(b), §63.7(g), §63.7(c)(2), §63.8(c)(3), §63.8(e)(2), and Regulation 19, §19.304]

    a. Common data collection elements for MACT I, Phase 1 and CCA IPT demonstrations (Specific Conditions #219.b and #219.c**)** shall include**:**
        i. HAP (as methanol) will be analyzed for each sample collected. A sample collection of 1 grab sample per test site per day for 15 consecutive days will be collected at required sample sites within the Segregated Zone. The following parameters will be recorded daily for the Segregated Zone over the 15 day IPT:
            1. Number of functioning aerator units
            2. Horsepower (Hp) of each aerator unit
            3. Hp/aerator x aerators running/day = Total Hp/day
            4. Main Foul Condensate Tank Hard Pipe (Equals Segregated Zone Inlet)
                i. Condensate flow in gallons/day
                ii. Soluble COD (1 grab sample/day) in mg/l
                iii. Daily soluble COD in lb/day as gal/day*mg/l*constant

        - iv. Daily methanol (1 grab sample/day) in mg/l
        - v. Daily methanol in lb/day as gal/day*mg/l* constant
        - vi. Daily kraft batch digester pulp production as oven dried tons of pulp per day (ODTP/Day)
      - 5. Calculated IPT COD/Hp ratio as the 15-day total soluble COD in lbs/15-dayIPT divided by Total Aeration Horsepower in Hp/15-dayIPT
      - 6. Calculated IPT methanol in lb/ODTP as the methanol lbs/15-dayIPT divided by the pulp production in ODTP/15-dayIPT
    - ii. Water 9 and Appendix C Forms shall be used to determine (for the Segregated Zone) the:
      - 1. HAP (as methanol) Volatilization Rate (Percent%)
      - 2. Fbio Biodegradation Rate (Percent%)
      - 3. HAP (as methanol) Breakthrough Rate (Percent%)

  - b. Initial Performance Test Demonstration – MACT I, Phase 1 Treatment
    - i. The IPT established Segregated Zone Fbio (Specific Condition #221 a.ii.2) will be multiplied by the IPT Methanol 15-day average lb/ODTP Specific Condition #221 a.i.6) to determine if the IPT has demonstrated the MACT I, Phase 1 treatment requirement of 10.2 lb/ODTP (Specific Condition #214)**.**
    - ii. The COD/Hp ratio (Specific Condition #221 a.i.5) will be used as the surrogate parameter which will determine if the Segregated Zone Fbio is no longer valid in the CMS calculations and if a retest is required.

  - c. Initial Performance Test Demonstration – CCA HAP Emission Reduction
    - i. The IPT CCA margin that may be applied to the IPT demonstration will be determined using the calculation logic outlined in Specific Condition #225.
    - ii. The parameters determined in Specific Condition #221 a.ii will be used with the IPT CCA margin calculations identified in Specific Condition #217 to determine if the IPT has demonstrated compliance with the CCA HAP emission reduction requirement of 0.34 lb/ODTP (as methanol).

222. The permittee shall maintain a continuous monitoring system to demonstrate compliance with MACT I, Phase 1 Treatment and CCA HAP emission reduction requirements. [40 CFR §63.453(j)(2) and (n) and Regulation 19, §19.304]

  - a. Continuous Monitoring System - MACT I, Phase 1 Treatment (Specific Conditions #214 and #224 c.ii)
    - i. The Segregated Zone Fbio (Specific Condition #221) will be hardwired in the mill's CMS to be used in back-calculating the 15-day rolling average HAP (as methanol) condensate collection value required to achieve a minimum 10.2 lb/ODTP MACT I Phase 1 condensate treatment (Specific Conditions #214 and #224 c.ii)

- ii. The emission factors hardwired into the CMS in Specific Condition #222.a.i will remain fixed so long as the daily Segregated Zone COD/HP ratio does not exceed the value established for COD/Hp in the IPT.
- iii. If the COD/Hp ratio exceeds the IPT established value, a physical Segregated Zone retest (Specific Condition #223) may be needed to confirm compliance with MACT I, Phase 1 treatment requirement in Specific Condition #214.

b. Continuous Monitoring System – CCA HAP Emission Reduction (Specific Conditions #215 and #224 c.iii)
  - i. The Segregated Zone Fbio, Volatilization, and Breakthrough determined during the IPT (Specific Condition #219) will be hardwired in the mill's CMS.
  - ii. The hardwired emission factors in Specific Condition #222.b.i will be utilized with the CCA over-collection identified in Specific Condition #225.c.iii and the calculations in Specific Condition #217 to determine the net CCA emissions debit.
  - iii. The emission factors hardwired into the CMS in Specific Condition #222.b.i will remain fixed so long as the daily Segregated Zone COD/Hp does not exceed the ratio established in Specific Condition #221.a.i.5.
  - iv. If the COD/Hp parameter exceeds the IPT established value, a physical Segregated Zone retest (Specific Condition #223) may be needed to confirm compliance with the CCA HAP emission reduction requirements in Specific Condition #215.
  - v. If the CCA over-collection is insufficient to demonstrate compliance with the CCA HAP emission reduction requirements in Specific Condition #215 using the short form calculations in Specific Condition #217 g**,** the mill may elect to test Aerated Stabilization Basin 1 and Aerated Stabilization Basin 2 to confirm the volatilization rate and use the calculations in Specific Condition #217 h to determine if compliance can be achieved.

223. The permittee shall conduct wastewater treatment system retests if the COD/Hp ratio exceeds the value established during the IPT, if the CCA over-collection margin is insufficient, or a scheduled quarterly retest to demonstrate compliance with MACT I, Phase 1 treatment and CCA HAP emission reduction requirements. [40 CFR §63.453(p)(1), §63.453(p)(2), and Regulation 19, §19.304]

a. Wastewater Retest (Segregated Zone) – MACT I, Phase 1 Treatment
  - i. The facility cannot use the IPT established Fbio to establish compliance with the MACT I, Phase 1 treatment requirement in Specific Condition #214 in the following cases:
    1. During a Quarterly Retest
    2. If the daily COD/Hp ratio exceeds the value established during the IPT

    - ii. The facility can conduct a retest of the Segregated Zone to determine the Fbio for the day(s) in question (or for the Quarterly Test) for temporary use in place of the IPT established Fbio to determine if the MACT I, Phase 1 treatment requirements in Specific Condition #214 have been demonstrated**.**
        1. Once compliance has been demonstrated with the Quarterly Test Fbio, or once the COD/Hp ratio (from an excursion) returns to a value at or below that established during the IPT, the original hardwired IPT Fbio can be re-applied to subsequent CMS calculations.
        2. If compliance cannot be demonstrated following the retest conditions**,** then a 24-hour period of excess emissions shall be recorded for each day of failure until compliance with the MACT I, Phase 1 treatment requirement in Specific Condition #214 is achieved.

- b. Wastewater Retest – MACT I Phase 2 CCA
    - i. The facility cannot use the IPT established Segregated Zone Fbio, Volatilization, or Breakthrough rates to establish compliance with the CCA HAP emission reduction requirement in Specific Condition 215 in the following cases:
        1. During a quarterly retest
        2. If the daily COD/Hp ratio exceeds the value established during the IPT
        3. If the CCA over-collection margin is insufficient to demonstrate compliance with the CCA HAP emission reduction requirement in Specific Condition #215,
    - ii. The facility can conduct a retest of the Segregated Zone to determine the Fbio for the day(s) in question (or for the Quarterly Test) for temporary use in place of the IPT established Fbio to determine if the CCA HAP emission reduction requirement in Specific Condition #215 has been demonstrated.
        1. Once compliance has been demonstrated with the applicable items in Specific Condition #223 b.i (1-3) for CCA HAP emission reduction (Specific Condition #215) using the calculations in Specific Condition #217 g, the original hardwired IPT Fbio, Volatilization, and Breakthrough rates can be re-applied to subsequent CMS calculations.
        2. If compliance cannot be demonstrated during the Segregated Zone retest using the calculations in Specific Condition 217 g, the facility may provide test data for the day of the failure or retest Aerated Stabilization Basin 1 and Aerated Stabilization Basin 2 and utilize the calculations in Specific Condition #217 h. If compliance is demonstrated, the original hardwired IPT Fbio,

Volatilization, and Breakthrough rates can be re-applied to subsequent CMS calculations.

3. If compliance cannot be demonstrated following the retest conditions in Specific Condition #223 b.ii 1 or 2**,** then a 24-hour period of excess emissions shall be recorded for each day of failure until compliance with the CCA HAP emission reduction requirement in Specific Condition #215 is achieved.

c. The permittee may substitute other appropriate operating parameters that demonstrate continuous compliance with MACT I, Phase 1 and CCA HAP emission reduction requirements. Proposed substitute monitoring parameters shall be submitted to the Department for approval.

224. The permittee shall conduct the Segregated Zone quarterly mass removal test procedures within 45 days after the beginning of each quarter using the mass removal test procedures specified in 40 CFR 64.457(c)(1) through (c)(3) and 63.457(L)(2). The quarterly mass removal test performed in the first quarter (annually) shall be performed for total HAPs and methanol. The remaining quarterly performance tests shall be performed for methanol, and the permittee may utilize the r value determined during the first quarter to represent the additional HAP content. The HAP mass removal obtained from the test shall be at least as great as the MACT I, Phase 1 treatment requirement specified in Specific Condition #214 and the CCA emission reduction requirement specified in Specific Condition #215. The permittee shall verify the CCA emission reductions specified in Specific Condition #215 by utilizing the calculation methodology provided in Specific Condition #217. [40 CFR §63.453(j)(3)and §63.457(L)(2) and Regulation 19, §19.304]

225. Some, but not necessarily all of the pulping process condensates identified in Specific Condition #212 for MACT I, Phase 1 and CCA compliance demonstration shall be routed to the existing Main Foul Condensate Collection Tank. [40 CFR §63.453(a) and Regulation 19, §19.304]

a. The permittee shall measure and record:
   i. Flow from the Main Foul Condensate Tank in gallons per day
   ii. Daily methanol concentration in mg/l from the Main Foul Condensate Tank
   iii. Daily batch digester kraft pulp production in oven dried tons of pulp per day (ODTP/day)
b. The permittee shall calculate:
   i. Methanol in lb/day from the Main Foul Condensate Tank into the Hard Pipe after the flow meter
   ii. The 15-day rolling total lb/day of methanol from the Main Foul Condensate Tank into the Hard Pipe
   iii. The 15-day rolling total ODTP from the batch digesters

iv. The 15-day rolling average lb/ODTP methanol collection calculated as the 15-day rolling total lb/day methanol, divided by the 15-day rolling total ODTP

c. The permittee shall further evaluate in the continuous monitoring system if:

i. The total 15-day rolling average methanol lb/ODTP calculated in Specific Condition #225 b.iv contains a value equal or greater than 11.1lb/ODTP.

1. If yes, then compliance has been achieved for
   a. MACT I, Phase 1 collection
   b. Additional compliance calculations will continue in Specific Condition #225 c.ii
2. If no, then compliance has not been achieved, and a period of excess emissions will be recorded for one 24-hour period for:
   a. MACT I, Phase 1 collection
   b. MACT I, Phase 1 treatment
   c. CCA emission reduction

ii. The total 15-day rolling average methanol lb/ODTP calculated in Specific Condition #225 b.iv contains sufficient margin against the Segregated Zone Fbio to demonstrate a 10.2 lb/ODTP methanol treatment.

1. If yes, then compliance has been achieved for:
   a. MACT I, Phase 1 collection
   b. MACT I, Phase 1 treatment
   c. Additional compliance calculations will continue in Specific Condition #225 c.iii
2. If no, then compliance has not been achieved, and a period of excess emissions will be recorded for one 24-hour period for:
   a. MACT I, Phase 1 treatment
   b. CCA emission reduction

iii. After 1.1 lb/ODTP of methanol (10% added above the 11.1 lb/ODTP MACT I, Phase 1 requirement, safety margin used to obtain the 15-day rolling average) is deducted from the remaining 15-day rolling average methanol margin (following the compliance demonstration in Specific Condition #225 c.ii)**,** any remaining methanol margin can be utilized toward CCA compliance demonstration calculations. The methanol margin is applied to the compliance calculations outlined in Specific Condition #217. The calculations must show that the CCA collection margin is sufficient to achieve at least a 0.34 lb/ODTP HAP (as methanol) mass emission reduction from the Transport and Handling System and WWT System.

1. If yes, then compliance has been demonstrated for:
   a. MACT I, Phase 1 collection
   b. MACT I, Phase 1 treatment
   c. CCA emission reduction
2. If no, then compliance has not been achieved and a period of excess emissions will be recorded for one 24-hour period for CCA emission reduction.

226. Exceedances of the MACT I, Phase 1 and/or CCA requirements (caused by events identified in the mill's startup, shutdown, and malfunction plan (required by 40 CFR §63.6, refer to Plantwide Condition 7)) shall be recorded and reported on a semi-annual basis. [40 CFR §63.453(o) and Regulation 19, §19.304]

227. The collected pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the individual drain system requirements specified in 40 CFR §63.960, §63.961, and §63.962 of Subpart RR of this part, except closed vent systems and control devices shall be designed and operated in accordance with 40 CFR §63.443(d) and §63.450 instead of in accordance with 40 CFR §63.962(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii). The closed collection system will meet the specified requirements by being a hard-piped individual drain system per 40 CFR §63.962(a) (2). Condensate collection tanks used for compliance with MACT I, Phase 1 and CCA compliance shall be equipped with a water seal per 40 CFR §63.962(b)(2)(i)(A). [40 CFR §63.446(d)(1) and Regulation 19, §19.304]

228. The permittee shall design and operate condensate collection tanks used for MACT I, Phase 1 and CCA compliance per the following requirements: [40 CFR §63.446(d)(2) and Regulation 19, §19.304]

    a. The fixed roof and all openings shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 ppm above background or as an enclosure maintained under negative pressure as indicated by testing conducted pursuant to 40 CFR §63.453(k)(4), vented into the LVHC Collection System, and routed to either Lime Kiln No. 1 (SN-09) or Lime Kiln No. 2 (SN-10).
    b. Each opening shall be maintained in a closed, sealed position at all times when the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance or repair.

229. If compliance is demonstrated using an instrument reading of less than 500 ppm, the permittee shall perform initial and subsequent annual tests to demonstrate that no detectable leaks are present in each condensate tank of the closed collection system. The tests shall be conducted using the procedure outlined in 40 CFR §63.457(d). [40 CFR §63.453(k)(3) and Regulation 19, §19.304]

230. If compliance is demonstrated by negative pressure, the permittee shall perform initial and subsequent annual tests to demonstrate that each enclosure is maintained at negative pressure as specified in 40 CFR §63.457(e). [40 CFR §63.453(k)(3) and Regulation 19, §19.304]

231. The permittee shall conduct a visual inspection of each condensate closed collection system at least every 30 days. The visual inspections shall verify that appropriate liquid levels in the water seals in the condensate collection tanks used for MACT I, Phase 1 and

CCA compliance are being maintained and identify any other defects that could reduce water seal control effectiveness (The permittee may measure and record the levels of these vessels continuously rather than visually inspect them). In addition, the permittee shall visually inspect the unburied portion of the collection system piping to verify that no defects are present. [40 CFR §63.453(l)(1) and Regulation 19, §19.304]

Odor Control – Oxygen Trim System

232. The permittee shall install an oxygen trim system to supplement black liquor oxidation at the recovery operations. The oxygen trim system shall reduce TRS emissions by no less than 39 tons per year, demonstrated annually on a calendar year basis. The permittee shall utilize the average monthly TRS CEMS data across the three recovery boilers (Specific Conditions #104, #117 and #130) to demonstrate the amount of TRS removed. This data shall be used to calculate the total amount of TRS removed by comparing to a baseline average TRS CEMS value of 19.7 ppm based on CEMS data obtained prior to June 2005 across the three recovery boilers. The permittee shall record the amount of TRS removed from the total condensate stream. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

233. The permittee shall maintain records which demonstrate compliance with Specific Condition #232. These records shall be kept onsite and provided to Department personnel upon request. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

SN-50, 56, and 57 - Additional Mill Operations

Source Description

The Mill maintains miscellaneous operations that support paper production. The Chip Piles (SN-50), the Pulp Mill Road Fugitives (SN-56), and the Landfill Fugitives (SN-57) are additional mill operations that are significant sources of emissions.

The Mill processes both softwood (pine chips and logs) and hardwood (oak chips). The chips are stored, screened, and chipped before being sent to the pulp mill for processing. The logs (softwood) are stored, sawed, debarked, chipped, screened, and sent to the mill.

Some of the softwood logs are sent directly to the Groundwood Mill for further processing. The emissions associated with the woodyard are accounted for in the Chip Pile (SN-50) source.

Specific Conditions

234. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #236, #237 and Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
50	Woodyard Emissions	PM_{10} VOC	1.8 3.1	836.1* 1913.4*
56	Pulp Mill Road Fugitives	PM_{10}	3.3	836.1*
57	Landfill	VOC CO	2.0 0.2	1913.4* 2041.1*

* Plantwide Applicability Limitation

235. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Conditions #236, #237, and Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
50	Woodyard Emissions	PM	1.8	1143.8*
56	Pulp Mill Road Fugitives	PM	13.2	1143.8*
57	Landfill	TRS Acetone	0.08 0.1	833.4* 0.1

SN	Description	Pollutant	lb/hr	tpy
		1,1,2,2-Tetrachloroethane	0.01	0.04
		1,2-Dichloroethane	0.01	0.01
		Acrylonitrile	0.02	0.06
		Benzene	0.01	0.03
		Carbon Disulfide	0.01	0.01
		Carbonyl Sulfide	0.01	0.01
		Carbon Tetrachloride	0.01	0.01
		Chloroform	0.01	0.01
		Chloromethane	0.01	0.01
		Hexane	0.03	0.10
		Mercury	2.20E-06	9.64E-06
		Methyl Isobutyl Ketone	0.01	0.04
		Methylene Chloride	0.05	0.21
		Toluene	0.14	0.61
		Vinyl Chloride	0.02	0.08
		Xylene	0.05	0.22

* Plantwide Applicability Limitation

236. The permittee shall not produce in excess of 740,220 tons of GWP and ADTUBP per twelve consecutive months combined. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

237. The landfill shall not accept in excess of 30,000 tons of waste per twelve consecutive months. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

238. The permittee shall maintain records which demonstrate compliance with the limits listed in Specific Conditions #236 and #237. The records shall be updated on a monthly basis for the annual limit. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A twelve month rolling total and each month's individual data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

Low Volume High Concentration (LVHC) Collection System

Source Description

The Pulp House and Power House area low-volume high concentration (LVHC) gases are currently collected from the following sources:

No. 1 and No. 2 MEE Evaporators
Turpentine Condensers
Turpentine Decanter
Digesters (14)
Blow Tank
Blow Heat Evaporator
Blow Heat Accumulator

The collected emissions from the above sources are sent to either the No. 1 Lime Kiln (SN-09) or the No. 2 Lime Kiln (SN-10) to be incinerated as part of the mill's existing non-condensable gas (NCG) collection and treatment system.

A Main Foul Condensate Collection Tank and a Turpentine Decanter Underflow Surge Tank have been installed as a part of the condensate collection and treatment requirements. Emissions from these tanks are collected and fed to the existing NCG system for destruction in the No. 1 Lime Kiln (SN-09) or the No. 2 Lime Kiln (SN-10).

An NCG/LVHC pre-scrubber removes sulfur compounds from the LVHC gases prior to destruction in the kilns. The emissions calculations have been developed to allow 500 hours per year of total pre-scrubber downtime for scrubber maintenance.

Specific Conditions

239. The NCG/LVHC pre-scrubber shall be operated at all time when LVHC gases are being collected and treated in the No. 1 or No. 2 Lime Kiln (SN-09 and SN-10), except that the permittee may bypass this scrubber for 500 hours per year. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

240. The permittee shall maintain records of the number of hours that the NCG/LVHC pre-scrubber is bypassed to demonstrate compliance with the previous condition. These records shall be updated on a monthly basis, kept on site, and provided to Department personnel upon request. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

241. The NCG/LVHC pre-scrubber shall be kept in good working condition at all times and shall meet the operating condition shown in the following table. The scrubber liquor flow rate shall be measured daily. The results shall be kept on site and be available to Department personnel upon request. This condition applies with the exception of the 500

hours per year that the NCG/LVHC pre-scrubber may be bypassed. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Parameter	Units	Minimum Operating Limits
White liquor flow rate	gal/min	>45

NESHAP Subpart S Standard

242. The permittee shall maintain negative pressure at each enclosure or hood opening as demonstrated by Specific Condition #247. Each enclosure or hood opening closed during the initial performance test required by Specific Condition #247 shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs. This requirement includes the fixed roofs of the condensate collection tanks, which function as enclosures relative to LVHC collection and control. [40 CFR §63.450(b) and Regulation 19, §19.304]

243. The permittee shall maintain the portion of the closed-vent system that is operated at positive pressure and located prior to a control device, with no detectable leaks as indicated by an instrument reading of less than 500 ppm by volume above background as demonstrated by Specific Condition #246. This portion includes the LVHC system segments downstream of the ejectors and NCG/LVHC Scrubber. [40 CFR §63.450(c) and Regulation 19, §19.304]

Monitoring Requirements

244. The permittee shall install, calibrate, maintain, and operate (according to manufacturer’s specification) a computer controlled valve position flow indicator on each of the following computer controlled bypass lines that provides a record of the presence of a gas stream flow in the line at least once every 15 minutes. For bypass line valves that are not computer controlled, the permittee shall maintain the bypass line valve at a closed position with a car seal or a seal placed on the valve closure mechanism in such a way that the valve or closure mechanism cannot be opened without breaking the seal. [40 CFR §63.450(d)(1) and (d)(2) and Regulation 19, §19.304]:

No. 1 and No. 2 MEE Evaporators – flow indicator
Turpentine Condensers – flow indicator
Turpentine Decanter – flow indicator
Digesters (14) – flow indicator and water seal
Blow Tank – water seal
Blow Heat Evaporator – flow indicator
Blow Heat Accumulator – water seal

245. The permittee shall perform a visual inspection of each enclosure opening at least every 30 days to ensure the opening is maintained in the same closed and sealed position as during the performance test except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [40 CFR §63.453(k)(1) and Regulation 19, §19.304]

246. The permittee shall conduct a visual inspection of the reasonably accessible portions of the closed vent system at least every 30 days. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects. [40 CFR §63.453(k)(2) and Regulation 19, §19.304]

247. The permittee shall perform initial and subsequent annual tests to demonstrate that no detectable leaks are present in each component of the closed-vent system operated at positive pressure. This includes the LVHC system segments downstream of the ejectors and NCG/LVHC Scrubber. The tests shall be conducted using the procedure outlined in 40 CFR §63.457(d). [40 CFR §63.453(k)(3) and Regulation 19, §19.304]

248. The permittee shall perform initial and subsequent annual tests to ensure that each enclosure opening is maintained at negative pressure. This requirement includes the fixed roofs of the condensate collection tanks, which function as enclosures relative to LVHC collection and control. The tests shall be conducted using one of the following procedures [40 CFR §63.453(k)(4) and Regulation 19, §19.304]:

    a. An anemometer to demonstrate flow in the enclosure opening.
    b. Measure the static pressure across the opening.
    c. Smoke tubes to demonstrate flow into the enclosure opening.

249. The permittee shall conduct a visual inspection of the valve or closure mechanism specified in §63.450(d)(2) at least every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line. [40 CFR §63.453(k)(5) and Regulation 19, §19.304]

250. The permittee shall undertake the following corrective actions as soon as practicable if an inspection required by Specific Conditions #245, #246, or #249 identifies any visible defects in the ductwork, piping, enclosures or connections to covers, or if an instrument reading of 500 ppm by volume or greater above background is measured, or if any enclosure openings are not maintained at negative pressure [40 CFR §63.453(k)(6) and Regulation 19, §19.304]:

    a. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.
    b. The repair or corrective action shall be completed no later than 15 days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the permittee determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from the delay of repair.

Repair of such equipment shall be completed by the end of the next process unit shutdown.

Recordkeeping and Reporting Requirements

251. The permittee shall prepare and maintain a site-specific inspection plan for each applicable enclosure opening and closed vent system including drawings or schematics of the components of the affected equipment. The following information shall be recorded for each inspection [40 CFR §63.454(b) and Regulation 19, §19.304]:
    a. date of inspection;
    b. the equipment type and identification;
    c. results of the negative pressure tests for enclosures (when applicable);
    d. results of leak detection tests (when applicable);
    e. the nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
    f. the date the defect or leak was detected and the date of each attempt to repair the defect or leak;
    g. repair methods applied in each attempt to repair the defect or leak;
    h. the reason for the delay if the defect or leak is not repaired within 15 days after discovery;
    i. the expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
    j. the date of successful repair of the defect or leak;
    k. the position and duration of opening of bypass line valves and the condition of any valve seals; and
    l. the duration of the use of the bypass valves on computer controlled valves.

SN-100 and SN-101 - Chip Mill Operations

Source Description

The Chip Mill operations include log processing and handling, chip and bark handling, road traffic, maintenance activities and other support operations. Fuel oil and storage operations include gasoline, diesel, hydraulic oil, and used oil. Currently, all chips are shipped to Evergreen where they are used in the pulping operations. Emissions from the chip mill operations are controlled by a water spray.

Log processing begins with the logs being cut to length by the slasher and then moved to one of two debarkers. From the debarkers, the logs are sent to a chipper that discharges the chips into one of the two chip bins. If both bins are full, the chips are discharged to the ground until they are loaded into trucks. Handling activities include conveyor transfer points and truck loading and unloading. The chipper, hog, and screens are included as transfer points. Products from the chip mill include chips and bark. The bark from the debarker is conveyed to the bark hog. Hogged fuel is then conveyed to a bark bin prior to being trucked to Evergreen, where it is fired in the bark boiler. Logs, chips and bark are all shipped into or out of the chip mill (SN-100) by truck on the mill-wide haul roads (SN-101).

Periodically, a portable whole stem chipper and a tub grinder are utilized at the chip mill. The portable whole stem chipper debarks and chip entire logs. The tub grinder grinds bark from the portable chipper into a size suitable for use as fuel in Evergreen's bark boiler.

Specific Conditions

252. The permittee shall not exceed the emission rates set forth in the following table. The hourly emission rates were calculated using a maximum throughput. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 19, §19.501 and 40 CFR Part 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
100	Chip Mill	PM_{10} VOC	3.7 4.0	836.1* 1913.4*
101	Chip Mill Road Fugitives	PM_{10}	5.0	836.1*

* Plantwide Applicability Limitation

253. The permittee shall not exceed the emission rates set forth in the following table. The hourly emission rates were calculated using a maximum throughput. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
100	Chip Mill	PM	12.1	1143.8*
101	Chip Mill Road Fugitives	PM	20.1	1143.8*

* Plantwide Applicability Limitation

SN-102 thru SN-112 - Cooling Towers

Source Description

Evergreen operates eighteen cooling towers as part of papermaking operations, mechanical (groundwood) pulping operations, and operations at the mills water treatment plant.

Specific Conditions

254. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
102 A	Lilie Hoffman Cooling Tower-Cell 1 (No. 2 PM Vacuum Pump Seal Water)	PM_{10}	0.2	836.1*
102 B	Lilie Hoffman Cooling Tower-Cell 2 (No. 2 PM Vacuum Pump Seal Water)	PM_{10}	0.2	836.1*
103	No. 2 PM SNC Marley Cooling Tower	PM_{10}	0.2	836.1*
104	No. 6 Marley Cooling Tower (No. 2 PM & Office Building)	PM_{10}	0.4	836.1*
105 A	Foster Wheeler Cooling Tower-Cell 1 (Groundwood Mill)	PM_{10}	0.3	836.1*
105 B	Foster Wheeler Cooling Tower-Cell 2 (Groundwood Mill)	PM_{10}	0.3	836.1*
106 A	No. 1 Ceramic Cooling Tower-Cell 1 (Extruder Chiller Water)	PM_{10}	0.3	836.1*
106 B	No. 2 Ceramic Cooling Tower-Cell 2 (Extruder Chiller Water)	PM_{10}	0.3	836.1*
107 A	No. 3 EVAPCO Cooling Tower-Cell 1 (Extruder Chiller Water)	PM_{10}	0.3	836.1*
107 B	No. 3 EVAPCO Cooling Tower-Cell 2 (Extruder Chiller Water)	PM_{10}	0.3	836.1*
108 A	No. 7 EVAPCO Cooling Tower-Cell 1 (Extruder Chiller Water)	PM_{10}	0.2	836.1*
108 B	No. 7 EVAPCO Cooling Tower-Cell 2 (Extruder Chiller Water)	PM_{10}	0.2	836.1*
109 A	No. 8 EVAPCO Cooling Tower-Cell 1 (Extruder Chiller Water)	PM_{10}	0.3	836.1*
109 B	No. 8 EVAPCO Cooling Tower-Cell 2 (Extruder Chiller Water)	PM_{10}	0.3	836.1*
110 A	No. 1 Marley Cooling Tower-Cell 1 (Water Plant)	PM_{10}	2.0	836.1*

SN	Description	Pollutant	lb/hr	tpy
110 B	No. 2 Marley Cooling Tower-Cell 2 (Water Plant)	PM_{10}	2.0	836.1*
111	No. 3 Marley Cooling Tower (Water Plant)	PM_{10}	1.2	836.1*
112	No. 4 Marley Cooling Tower (Water Plant)	PM_{10}	2.1	836.1*

* Plantwide Applicability Limitation

255. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
102 A	Lilie Hoffman Cooling Tower-Cell 1 (No. 2 PM Vacuum Pump Seal Water)	PM	0.2	1143.8*
102 B	Lilie Hoffman Cooling Tower-Cell 2 (No. 2 PM Vacuum Pump Seal Water)	PM	0.2	1143.8*
103	No. 2 PM SNC Marley Cooling Tower	PM	0.2	1143.8*
104	No. 6 Marley Cooling Tower (No. 2 PM & Office Building)	PM	0.4	1143.8*
105 A	Foster Wheeler Cooling Tower-Cell 1 (Groundwood Mill)	PM	0.3	1143.8*
105 B	Foster Wheeler Cooling Tower-Cell 2 (Groundwood Mill)	PM	0.3	1143.8*
106 A	No. 1 Ceramic Cooling Tower-Cell 1 (Extruder Chiller Water)	PM	0.3	1143.8*
106 B	No. 2 Ceramic Cooling Tower-Cell 2 (Extruder Chiller Water)	PM	0.3	1143.8*
107 A	No. 3 EVAPCO Cooling Tower-Cell 1 (Extruder Chiller Water)	PM	0.3	1143.8*
107 B	No. 3 EVAPCO Cooling Tower-Cell 2 (Extruder Chiller Water)	PM	0.3	1143.8*
108 A	No. 7 EVAPCO Cooling Tower-Cell 1 (Extruder Chiller Water)	PM	0.2	1143.8*
108 B	No. 7 EVAPCO Cooling Tower-Cell 2 (Extruder Chiller Water)	PM	0.2	1143.8*
109 A	No. 8 EVAPCO Cooling Tower-Cell 1 (Extruder Chiller Water)	PM	0.3	1143.8*
109 B	No. 8 EVAPCO Cooling Tower-Cell 2 (Extruder Chiller Water)	PM	0.3	1143.8*
110 A	No. 1 Marley Cooling Tower-Cell 1	PM	2.0	1143.8*

SN	Description	Pollutant	lb/hr	tpy
	(Water Plant)			
110 B	No. 2 Marley Cooling Tower-Cell 2 (Water Plant)	PM	2.0	1143.8*
111	No. 3 Marley Cooling Tower (Water Plant)	PM	1.2	1143.8*
112	No. 4 Marley Cooling Tower (Water Plant)	PM	2.1	1143.8*

* Plantwide Applicability Limitation

256. The permittee shall maintain the conductivity of each of the Cooling Towers at or below 3,000 μmhos. The conductivity of the cooling water for each Cooling Tower shall be monitored at least weekly. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

257. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #256. The records shall be updated by the 15th of the month following the month to which the records pertain. The records shall be kept on site and made available to Department personnel upon request. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

SN-113 - AKD Sizing Plant

Source Description

Evergreen uses Alkyl Ketene Dimer (AKD) sizing at the No. 2 Paper Machine (SN-54) in the production of liquid packaging board. An on-site AKD sizing generation plant allows conversion of the AKD to a higher solids content (21%) version of the AKD (EVG2007).

The batch AKD sizing process is a three stage operation: premix preparation, processing, and adjustment. During the premix stage, starch, dispersant, and water are blended in a starch cooker. The mixture is cooked using direct steam injection. After cooking, aluminum sulfate is added along with sulfuric acid for pH adjustment. AKD is then melted by adding it to the hot mixture. Biocide is added at this point. During the processing stage, the mixture (premix) is homogenized and cooled through a series of heat exchangers. The product is then transferred to a storage tank, where it is tested and final adjustments (water addition) are made to meet product specifications prior to use at the No. 2 Paper Machine.

Specific Conditions

258. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 19 §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
113	AKD Sizing Plant	PM_{10} VOC	2.1 0.1	836.1* 1913.4*

* Plantwide Applicability Limitation

259. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
113	AKD Sizing Plant	PM Propylene Dichloride	2.1 0.09	1143.8* 0.41

* Plantwide Applicability Limitation

260. The alkyl ketene dimer shall not contain more than 9.2 ppm of Propylene Dichloride. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

261. The permittee shall maintain monthly records to demonstrate compliance with the Propylene Dichloride ton per year (tpy) limits listed in Specific Condition #259 and the Propylene Dichloride usage limit in Specific Condition #260. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. A twelve month rolling total and each individual month's data shall be maintained on-site, made available to Department personnel upon request and submitted in accordance with General Provision #7. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-114 through SN-119, SN-121, and SN-122 - Engines

Source Description

SN-114 is a 48 hp Duetz model D2011L03i diesel fired engine (installed in 2013) that operates as an emergency backup for the kiln drive system for the No. 1 Lime Kiln. This engine (SN-114) is certified by the manufacturer to meet the EPA Nonroad Diesel Tier 4 emissions standards. SN-115 is a 100 hp CNH model FN1870-I8270 diesel-fired engine (installed in 2013) that serves as an emergency backup for the kiln drive system for the No. 2 Lime Kiln. This engine (SN-115) is certified by the manufacturer to meet the EPA Nonroad Diesel Tier 4 emissions standards. SN-116 is a 37 hp Wisconsin model VG4D2 gasoline-fired engine (installed in 2005) that serves as an emergency back-up for the facility's Mud Storage Rake system. SN-117 is a 425 hp Caterpillar model D346 diesel-fired engine (installed in 1995) with an associated emergency use water pump. SN-118 is a 425 hp Caterpillar model 3406 diesel-fired engine (installed in 1995) with an associated emergency use water pump. These engines (SN-117 and SN-118) serve as emergency lift pumps at the primary clarifier of the waste water treatment system (SN-49). They are operated periodically for maintenance and testing, as well as for pumping water for cleaning at the Chip Mill. SN-119 is a 340 hp Cummins model NT-855-F2 diesel-fired engine with and associated emergency use water pump. These engines serve as emergency back-ups for the facility's water pumping system. SN-119 is operated periodically for maintenance and testing; SN-121 is a 290 hp Cummins model NT-855 diesel-fired engine installed in 1985. The engine's sole purpose is to provide emergency pumping of water from the Water Plant to the Power Plant. SN-122 is a 128 hp Detroit –Allison model 5043-7001 diesel fired engine installed in 1985. The sole purpose of this SN-122 is emergency pumping of water from the reservoir to the storage tanks. Both SN-121 and SN-122 are operated periodically for testing and maintenance.

Specific Conditions

262. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #266 and Plantwide Conditions #162 through #181. [Regulation 19 §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
114	No. 1 Kiln Auxiliary Drive (48 hp diesel fired engine)	PM_{10}	0.1	836.1*
		SO_2	0.1	392.4*
		VOC	0.1	1458.1*
		CO	0.5	2041.1*
		NO_X	0.6	1913.4*
115	No. 2 Kiln Auxiliary Drive (100 hp diesel fired engine)	PM_{10}	0.3	836.1*
		SO_2	0.3	392.4*
		VOC	0.3	1458.1*
		CO	0.7	2041.1*

SN	Description	Pollutant	lb/hr	tpy
		NO_X	1.6	1913.4*
116	Mud Storage Rake Auxiliary Drive (37 hp gasoline-fired engine)	PM_{10}	0.1	836.1*
		SO_2	0.1	392.4*
		VOC	0.6	1458.1*
		CO	0.3	2041.1*
		NO_X	0.5	1913.4*
117	No. 1 Emergency Clarifier Pump (425 hp diesel-fired engine)	PM_{10}	1.0	836.1*
		SO_2	0.9	392.4*
		VOC	1.1	1458.1*
		CO	2.9	2041.1*
		NO_X	13.2	1913.4*
118	No. 2 Emergency Clarifier Pump (425 hp diesel-fired engine)	PM_{10}	1.0	836.1*
		SO_2	0.9	392.4*
		VOC	1.1	1458.1*
		CO	2.9	2041.1*
		NO_X	13.2	1913.4*
119	Emergency Fire Pump (340 hp diesel-fired engine)	PM_{10}	0.8	836.1*
		SO_2	0.7	392.4*
		VOC	1.1	1458.1*
		CO	2.3	2041.1*
		NO_X	10.6	1913.4*
121	Water Plant Emergency Boiler Water Engine (290 hp)	PM_{10}	0.7	836.1*
		SO_2	0.6	392.4*
		VOC	0.8	1458.1*
		CO	2.0	2041.1*
		NO_X	9.0	1913.4*
122	Reservoir Emergency Boiler Water Engine (Inside Water Plant) (128 hp)	PM_{10}	0.3	836.1*
		SO_2	0.3	392.4*
		VOC	0.4	1458.1*
		CO	0.9	2041.1*
		NO_X	4.0	1913.4*

* Plantwide Applicability Limitation

263. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Specific Condition #266 and Plantwide Conditions #162 through #181. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
114	No. 1 Kiln Auxillary Drive	PM	0.1	1143.8*
		Benzene	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
	(48 hp diesel fired engine)	Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
115	No. 2 Kiln Auxillary Drive (100 hp diesel fired engine)	PM	0.1	1143.8*
		Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
116	Mud Storage Rake Auxiliary Drive (37 hp gasoline-fired engine)	PM	0.1	1143.8*
		Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
117	No. 1 Emergency Clarifier Pump (425 hp diesel-fired engine)	PM	0.1	1143.8*
		Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01
118	No. 2 Emergency Clarifier Pump (425 hp diesel-fired engine)	PM	0.1	1143.8*
		Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01

SN	Description	Pollutant	lb/hr	tpy
		Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.01 0.01 0.01 0.01 0.01	0.01 0.01 0.01 0.01 0.01
119	Emergency Fire Pump (340 hp diesel-fired engine)	PM Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	1143.8* 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
121	Water Plant Emergency Boiler Water Engine (290 hp)	PM Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	1143.8* 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
122	Reservoir Emergency Boiler Water Engine (Inside Water Plant) (128 hp)	PM Benzene Toluene Xylene 1,3-Butadiene Formaldehyde Acetaldehyde Acrolein Naphthalene Polycyclic Organic Matter	0.1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	1143.8* 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01

* Plantwide Applicability Limitation

264. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
114 through 119, 121,	20%	Regulation 19 §19.503 and

SN	Limit	Regulatory Citation
and 122		40 CFR Part 52, Subpart E

265. Daily observations of the opacity from SN-114 through SN-119, SN-121, and SN-122 shall be conducted by a person trained but not necessarily certified in EPA Reference Method 9 whenever they are in operation for more than 24 consecutive hours. If visible emissions in excess of the permitted levels are detected, the permittee shall immediately take action to identify the cause of the visible emissions in excess of the permit limit, implement corrective action, and perform an EPA Reference Method 9 test to verify emissions are not in excess of the permitted level. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request. [Regulation 19 §19.503 and 40 CFR Part 52, Subpart E]

   a. The date and time of the observation.
   b. If visible emissions which appeared to be above the permitted limit were detected.
   c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
   d. The name of the person conducting the opacity observations.

266. The permittee shall not operate each emergency engine (SN-114 through SN-119, SN-121, and SN-122) in excess of 500 total hours (emergency and non-emergency) per calendar year in order to demonstrate compliance with the annual emission rate limits. Emergency operation in excess of these hours may be allowable but shall be reported and will be evaluated in accordance with Regulation 19 §19.602 and other applicable regulations. [Regulation 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

267. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #266. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The calendar year totals and each individual month’s data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision #7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]

NESHAP Subpart ZZZZ Conditions for SN-116 through SN-119, SN-121, and SN-122

268. 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 (and as

specified below) which apply to you. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6602]

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

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	a. Change oil and filter every 500 hours of operation or annually, whichever comes first. 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.

269. 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. [Regulation 19 §19.304 and 40 CFR Part 63 Footnote 1 of Table 2c]

270. You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6605(a) and (b)]

271. The permittee 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(e)]

272. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(f)]

273. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(h)]

274. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(i)]

275. You must demonstrate continuous compliance with each emission limitation, operating limitation and other requirements in Tables 2c of 40 CFR Part 63, Subpart ZZZZ that apply to you according to methods specified in Table 6 of 40 CFR Part 63, Subpart ZZZZ, listed below. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6640(a)]
Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

276. You must report each instance in which you did not meet the operating limitations in Table 2c to this subpart that apply to you. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. 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. [Regulation 19 §19.304, 40 CFR Part 63 §63.6640(b), and §63.6650(f)]

277. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6640(e)]

278. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6640(f)]

  a. There is no time limit on the use of emergency stationary RICE in emergency situations.
  b. 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.

c. 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.

279. You must keep the following records: [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(a)]

a. 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).
b. Records of all required maintenance performed on the air pollution control and monitoring equipment.

280. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(d)]

281. For each existing stationary emergency RICE, 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(e)]

282. For each existing stationary emergency RICE, 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(f)]

283. Records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1). 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. 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). [Regulation 19 §19.304 and 40 CFR Part 63 §63.6660(a)(b) and (c)]

NESHAP Subpart ZZZZ Conditions for SN-114 and SN-115

284. SN-114 and SN-115 must meet the requirements of 40 CFR Part 63 Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6590(c)(3)]

NSPS Subpart IIII Conditions for SN-114 and SN-115

285. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4200(a)(4)]

286. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4200(c)]

287. 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 (as specified below), for all pollutants, for the same model year and maximum engine power

for their 2007 model year and later emergency stationary CI ICE. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4205(b)]

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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4202(a)(1) and (2)]

    i. For engines with a maximum engine power less than 37 KW (50 HP):

        1. 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
        2. 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.

    ii. 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.

288. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4206]

289. Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a). [Regulation 19 §19.304 and 40 CFR Part 60 §60.4207(a)]

290. Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4207(b)]

291. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4208(a)]

292. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4208(b)]

293. 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 section §60.4208 after the dates specified in paragraphs (a) through (g) of this section. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4208(h)]

294. The requirements of section §60.4208 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4208(i)]

295. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4209(a)]

296. 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: [Regulation 19 §19.304 and 40 CFR Part 60 §60.4211(a)(1) through (3)]

    a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
    b. Change only those emission-related settings that are permitted by the manufacturer; and
    c. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

297. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4211(c)]

298. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4211(f)(1) through (3)]

a. There is no time limit on the use of emergency stationary ICE in emergency situations.
b. 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.

c. 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:

1. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
2. 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.
3. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
4. The power is provided only to the facility itself or to support the local transmission and distribution system.
5. 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.

299. 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: [Regulation 19 §19.304 and 40 CFR Part 60 §60.4211(g)(1) and (2)]

a. 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.
b. 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.

300. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4214(b)]

301. 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. [Regulation 19 §19.304 and 40 CFR Part 60 §60.4214(d)(1) through (3)]

a. 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.

b. 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.
c. 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.

SN-120 Water Pump Engine

Source Description

SN-120 is an 82 HP Detroid Model 10347012 diesel-fired engine with an associated water pump. This engine serves as a back-up for the facility's water pumping system. It is operated periodically for maintenance and testing. SN-120 is also used for pumping water for cleaning at the Chip Mill and during maintenance related hot-work. It is classified as an existing non-emergency, non-black start CI stationary RICE under 40 CFR Part 63, Subpart ZZZZ.

Specific Conditions

302. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 19 §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
120	Water Pump Engine (82 hp diesel-fired engine)	PM_{10}	0.2	836.1*
		SO_2	0.2	392.4*
		VOC	0.3	1458.1*
		CO	0.6	2041.1*
		NO_X	2.6	1913.4*

* Plantwide Applicability Limitation

303. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by compliance with Plantwide Conditions #162 through #181. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
120	Water Pump Engine (82 hp diesel-fired engine)	PM	0.1	1143.8*
		Benzene	0.01	0.01
		Toluene	0.01	0.01
		Xylene	0.01	0.01
		1,3-Butadiene	0.01	0.01
		Formaldehyde	0.01	0.01
		Acetaldehyde	0.01	0.01
		Acrolein	0.01	0.01
		Naphthalene	0.01	0.01
		Polycyclic Organic Matter	0.01	0.01

* Plantwide Applicability Limitation

304. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
120	20%	Regulation 19 §19.503 and 40 CFR Part 52, Subpart E

305. Daily observations of the opacity from SN-120 shall be conducted by a person trained but not necessarily certified in EPA Reference Method 9 whenever it is in operation for more than 24 consecutive hours. If visible emissions in excess of the permitted levels are detected, the permittee shall immediately take action to identify the cause of the visible emissions in excess of the permit limit, implement corrective action, and perform an EPA Reference Method 9 test to verify emissions are not in excess of the permitted level. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request. [Regulation 19 §19.503 and 40 CFR Part 52, Subpart E]

a. The date and time of the observation.
b. If visible emissions which appeared to be above the permitted limit were detected.
c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
d. The name of the person conducting the opacity observations.

NESHAP Subpart ZZZZ Conditions

306. 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, specified below. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6602]

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

For each . . .	You must meet the following requirement, except during periods of startup . . .
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.[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.[2]

[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 2c of this subpart.
[2] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

307. You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6605(a) and (b)]

308. The permittee 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(e)]

309. 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 Table 2c to this subpart apply. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(h)]

310. You have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6625(i)]

311. You must demonstrate continuous compliance with each emission limitation, operating limitation and other requirements in Tables 2c to this subpart that apply to you according to methods specified in Table 6 to this subpart, specified below. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6640(a)]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

312. You must report each instance in which you did not meet the operating limitations in Table 2c to this subpart that apply to you. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. 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. [Regulation 19 §19.304, 40 CFR Part 63 §63.6640(b), and §63.6650(f)]

313. 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 <u>not</u> 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6640(e)]

314. You must keep the following records: [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(a)]

    a. 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).
    b. Records of all required maintenance performed on the air pollution control and monitoring equipment.

315. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(d)]

316. 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. [Regulation 19 §19.304 and 40 CFR Part 63 §63.6655(e)]

317. Records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1). 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. 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). [Regulation 19 §19.304 and 40 CFR Part 63 §63.6660(a)(b) and (c)]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Evergreen Packaging, Inc. will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial startup of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. The permittee must provide:

   a. Sampling ports adequate for applicable test methods;
   b. Safe sampling platforms;
   c. Safe access to sampling platforms; and
   d. Utilities for sampling and testing equipment.

   [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

7. The permittee must prepare and implement a Startup, Shutdown, and Malfunction Plan (SSM). If the Department requests a review of the SSM, the permittee will make the SSM available for review. The permittee must keep a copy of the SSM at the source's

location and retain all previous versions of the SSM plan for five years. [Regulation 19, §19.304 and 40 CFR 63.6(e)(3)]

8. For non-criteria emission limits that were developed based on emission factors (i.e., from published sources or based on site specific test data), a change in the emission factors that affects the estimated emission rates shall not be considered a violation of the permit limits. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Title VI Provisions

9. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]

   a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
   b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
   c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
   d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

10. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]

   a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
   c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)
   e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

11. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

12. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

13. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

NESHAP Requirements

NESHAP Subpart S

14. The facility is subject to and shall comply with applicable provisions of 40 CFR Part 63 Subpart S - National Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. A copy of Subpart S is provided in Appendix D. Applicable provisions include, but are not limited to, those specified throughout the permit.

NESHAP Subpart MM

15. The facility is subject to and shall comply with applicable provisions of 40 CFR Part 63 Subpart MM - National Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semichemical Pulp Mills. A copy of Subpart MM is provided in Appendix E. Applicable provisions include, but are not limited to, those specified in the following conditions.

16. The permittee must establish PM emissions limits for each existing kraft or soda recovery furnace, smelt dissolving tank, and lime kiln that operates 6,300 hours per year or more by procedures listed below. Affected sources include three recovery boilers (SN-02 through SN-04), three smelt dissolving tanks (SN-06 through SN-08) and two lime kilns (SN-09 and SN-10) [40 CFR §63.862(a) (1) (ii)].
    a. Establishing an overall PM emission limit for each existing process unit in the chemical recovery system at the kraft or soda pulp mill using the methods in 40 CFR Part 63 §63.865(a)(1) and (2).

b. The emissions limits for each kraft recovery furnace, smelt dissolving tank, and lime kiln that are used to establish the overall PM limit must not be less stringent than the emissions limitations required by §60.282 of 40 CFR Part 60 for any kraft recovery furnace, smelt dissolving tank, or lime kiln that is subject to the requirements of §60.282.

c. Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must ensure that the PM emissions discharged to the atmosphere from each of these sources are less than or equal to the applicable PM emissions limits, established using the methods in 40 CFR §63.865(a) (1), that are used to establish the overall PM emissions limits.

d. Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must reestablish the emissions limits determined in section (a) of this condition if either of the following actions are taken:

    i. The air pollution control system for any existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established in section a of this condition is modified (as defined in 40 CFR §63.861) or replaced; or

    ii. Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established is shut down for more than 60 consecutive days.

17. For each monitoring system required in 40 CFR §63.864, the permittee must develop and make available for inspection by the Administrator, upon request, a site-specific monitoring plan that addresses the following provisions [40 CFR §63.864(a)]:

    a. Installation of the sampling probe or other interface at a measurement location relative to each affected source or process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

    b. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system; and

    c. Performance evaluation procedures and acceptance criteria (e.g., calibrations).

    d. Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (3), and (4)(ii);

    e. Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d)(2); and

    f. Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c), (e) (1), (e) (2) (i) and §63.866.

18. The permittee must conduct a performance evaluation of each monitoring system of each affected source in accordance with the site-specific monitoring plan [40 CFR §63.864(b)].

19. The permittee must operate and maintain the monitoring system of each affected source in continuous operation according to the site-specific monitoring plan [40 CFR §63.864(c)].

20. The permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) to monitor emissions from the recovery boilers (SN-02 through 04) each equipped with an ESP, according to the following provisions [40 CFR §63.864 (d)].
    a. Each COMS must be installed, operated, and maintained according to Performance Specification 1 of 40 CFR Part 60, Appendix B.
    b. A performance evaluation of each COMS must be conducted according to the requirements in §63.8 and according to Performance Specification 1 of 40 CFR Part 60, Appendix B.
    c. As specified in §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
    d. The COMS data must be reduced as specified in §63.8(g) (2).

21. The permittee must install, calibrate, maintain, and operate a continuous parameter monitoring system (CPMS) compliant with 40 CFR §63.864(e), that can be used to determine and record the pressure drop across the affected scrubbers and the scrubbing liquid flow rate using the procedures in §63.8(c), as well as the procedures in paragraphs (e) (10) (i) and (ii) of §63.864. [40 CFR §63.864 (e)(10)]:
    a. The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber(s) must be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (±2 inches of water gage pressure); and
    b. The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

22. The permittee must determine the operating range for the monitoring parameters of the wet scrubber using the following methods [40 CFR §63.864 (j)]:
    a. The permittee must conduct an initial performance test required in §63.865 for the wet scrubber; or
    b. The permittee may base operating ranges on values recorded during previous performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in 40 CFR Part 63 Subpart MM. The permittee must certify that all control techniques and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained.
    c. The permittee may establish expanded or replacement operating ranges for the monitoring parameter values listed in Plantwide Condition 20 [§63.864 (e) (10)]

and established in Plantwide Condition 21 [§63.864 (j) (1) or (2)] during subsequent performance tests using the test methods in 40 CFR §63.865.

d. The permittee must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values.

e. During the period of each performance test for the wet scrubber, the permittee must record the pressure drop across the scrubber and the scrubbing liquid flow rate over the same time period as the performance test while the vent stream is routed and constituted normally. The permittee must locate the pressure and flow monitoring devices in positions that provide representative measurements of these parameters.

f. During the period, if any, between the compliance date specified for the affected source in 40 CFR §63.863 and the date upon which monitoring systems have been installed and validated and any applicable operating ranges for monitoring parameters have been set, the owner or operator of the affected source or process unit must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

23. Following the compliance date (extended to March 12, 2005), the permittee is required to implement corrective action, if the following monitoring exceedances occur [40 CFR §63.864 (k)(1)].
    a. For a new or existing kraft or soda recovery furnace or lime kiln equipped with an ESP, when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity; and
    b. For an existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, an exceedance occurs when any 3-hour average parameter value is outside the range of values established in §63.864(j) and Plantwide Condition #21.

24. The permittee is in violation of the standards of §63.862 if the following monitoring exceedances occur [40 CFR §63.864 (k) (2)].
    a. For an existing kraft or soda recovery furnace equipped with an ESP, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period and
    b. Following the initial performance test, for a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, an exceedance occurs when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in paragraph §63.864(j) and Plantwide Condition #22.

25. The permittee shall conduct an initial performance test using the test methods and procedures listed in §63.7 and §63.865(b) [40 CFR §63.865].

26. The owner or operator of a process unit seeking to comply with a PM emission limit under §63.862(a)(1)(ii)(A) and Plantwide Condition #16 must use the following procedures [40 CFR §63.865(a)]:
    a. Determine the overall PM emission limit for the chemical recovery system at the mill using Equation 1 of §63.862(a) (1) [See attachment].
    b. Establish an emission limit for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln; and, using these emissions limits, determine the overall PM emission rate for the chemical recovery system at the mill using the procedures in paragraphs (a)(2)(i) through (v) of §63.865, such that the overall PM emission rate calculated in paragraph (a)(2)(v) of §63.865 is less than or equal to the overall PM emission limit determined in paragraph (a)(1) of §63.865, as appropriate.
        i. The PM emission rate from each affected recovery furnace must be determined using Equation 2 of §63.865 (a) (2) (i).
        ii. The PM emission rate from each affected smelt dissolving tank must be determined using Equation 3 of §63.865 (a) (2) (ii).
        iii. The PM emission rate from each affected lime kiln must be determined using Equation 4 of §63.865 (a) (2) (iii).
        iv. If more than one similar process unit is operated in the chemical recovery system at the kraft or soda pulp mill, Equation 5 of §63.865 (a) (2) (iv) must be used to calculate the overall PM emission rate from all similar process units in the chemical recovery system at the mill and must be used in determining the overall PM emission rate for the chemical recovery system at the mill.
        v. The overall PM emission rate for the chemical recovery system at the mill must be determined using Equation 6 of §63.865 (a) (2) (v).
        vi. After the Administrator has approved the PM emissions limits for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, the owner or operator complying with an overall PM emission limit established in §63.862(a)(1)(ii) must demonstrate compliance with the HAP metals standard by demonstrating compliance with the approved PM emissions limits for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, using the test methods and procedures in §63.865(b).

27. The permittee must use the following procedures to show compliance with §63.862 (a) [40 CFR §63.865(b)].
    a. For purposes of determining the concentration or mass of PM emitted from each kraft or soda recovery furnace, sulfite combustion unit, smelt dissolving tank, or lime kiln, Method 5 or 29 in appendix A of 40 CFR part 60 must be used, except that Method 17 in appendix A of 40 CFR part 60 may be used in lieu of Method 5 or Method 29 if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17, and the stack temperature is no greater than 205^{o}C (400^{o}F). For Methods 5, 29, and 17, the sampling time and sample volume for each run

must be at least 60 minutes and 0.90 dscm (31.8 dscf), and water must be used as the cleanup solvent instead of acetone in the sample recovery procedure.

b. For sources complying with 40 CFR §63.862(a) or (b), the PM concentration must be corrected to the appropriate oxygen concentration using Equation 7 of §63.865(b) (2).

c. Method 3A or 3B in appendix A of 40 CFR Part 60 must be used to determine the oxygen concentration. The voluntary consensus standard ANSI/ASME PTC 19.10-1981--Part 10 (incorporated by reference—see §63.14) may be used as an alternative to using Method 3B. The gas sample must be taken at the same time and at the same traverse points as the particulate sample.

d. For purposes of complying with §63.862(a) (1) (ii) (A), the volumetric gas flow rate must be corrected to the appropriate oxygen concentration using Equation 8 of §63.865 (b) (4).
   i. For purposes of selecting sampling port location and number of traverse points, Method 1 or 1A in appendix A of 40 CFR part 60 must be used;
   ii. For purposes of determining stack gas velocity and volumetric flow rate, Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A of 40 CFR part 60 must be used;
   iii. For purposes of conducting gas analysis, Method 3, 3A, or 3B in appendix A of 40 CFR part 60 must be used. The voluntary consensus standard ANSI/ASME PTC 19.10-1981--Part 10 (incorporated by reference--see §63.14) may be used as an alternative to using Method 3B; and
   iv. For purposes of determining moisture content of stack gas, Method 4 in appendix A of 40 CFR part 60 must be used.

e. Process data measured during the performance test must be used to determine the black liquor solids firing rate on a dry basis and the CaO production rate.

28. The permittee must develop a written plan as described in §63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with the standards. In addition to the information required in §63.6(e), the plan must include the following requirements [40 CFR §63.866 (a)].
   a. Procedures for responding to any process parameter level that is inconsistent with the level(s) established under §63.864(j)(2), including the procedures in paragraphs (a)(1)(i) and (ii) of §63.866, as follows:
      i. Procedures to determine and record the cause of an operating parameter exceedance and the time the exceedance began and ended; and
      ii. Corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance.
   b. The startup, shutdown, and malfunction plan also must include the schedules listed in paragraphs (a)(2)(i) and (ii) of §63.866, as follows:

c. A maintenance schedule for each control technique that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance; and
d. An inspection schedule for each continuous monitoring system required under §63.864 to ensure, at least once in each 24-hour period, that each continuous monitoring system is properly functioning.

29. The permittee must maintain records of any occurrence when corrective action is required under §63.864(k) (1) and Plantwide Condition #23, and when a violation is noted under §63.864(k) (2) and Plantwide Condition #23 [40 CFR §63.866 (b)].

30. In addition to the general records required by §63.10(b) (2), the permittee must maintain records of the following information [40 CFR §63.866 (c)].
    a. Records of black liquor solids firing rates in units of Mg/d or ton/d for all recovery furnaces and semichemical combustion units;
    b. Records of CaO production rates in units of Mg/d or ton/d for all lime kilns;
    c. Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;
    d. Records and documentation of supporting calculations for compliance determinations made under §63.865(a) through (e); and
    e. Records of monitoring parameter ranges established for each affected source or process unit.

31. The permittee must submit the applicable notifications from 40 CFR Part 63 Subpart A, as specified in Table 1 of 40 CFR Part 63 Subpart MM [40 CFR §63.867 (a)(1)].

32. The permittee must comply with the additional reporting requirements for HAP metals standards listed, as follows [40 CFR §63.867(b)]:
    a. Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a) (1) (ii) and Plantwide Condition #16 must submit the PM emissions limits determined in §63.865(a) for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln to the Administrator for approval. The emissions limits must be submitted as part of the notification of compliance status required under Subpart A of 40 CFR Part 63.
    b. Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a) (1) (ii) and Plantwide Condition #16 must submit the calculations and supporting documentation used in §63.865(a) (1) and (2) to the Administrator as part of the notification of compliance status required under Subpart A of 40 CFR Part 63.

- c. After the Administrator has approved the emissions limits for any process unit, the owner or operator of a process unit must notify the Administrator before any of the following actions are taken [40 CFR §63.867 (b)(3)]:
    - i. The air pollution control system for any process unit is modified or replaced;
    - ii. Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda pulp mill complying with the PM emissions limits in §63.862(a)(1)(ii) is shut down for more than 60 consecutive days;
    - iii. A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit is changed; or
    - iv. The black liquor solids firing rate for any kraft or soda recovery furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.
- d. An owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a) (1) (ii) and seeking to perform the actions in paragraph c. i. or c. ii. of this condition [§63.867 (b) (3) (i) or (ii)] must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation required in paragraph b of this condition [§63.867(b) (2)] to the Administrator. All modified PM emissions limits are subject to approval by the Administrator.

33. The permittee must report quarterly, if measured parameters meet any of the conditions specified in Plantwide Conditions #22 and #23 [§63.864 (k)(1) or (2)]. This report must contain the information specified in 40 CFR §63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in Plantwide Condition #23 [§63.864(k) (1)], and the number and duration of occurrences when the source met or exceeded the conditions in Plantwide Condition #24 [§63.864(k) (2)]. Reporting excess emissions below the violation thresholds of §63.864(k) does not constitute a violation of the applicable standard [40 CFR §63.867(c)].
    - a. When no exceedances of parameters have occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period.
    - b. The owner or operator of an affected source or process unit subject to the requirements of Subpart MM and Subpart S of 40 CFR Part 63 may combine excess emissions and/or summary reports for the mill.

34. The permittee shall develop a startup, shutdown, and malfunction (SSM) plan containing operation and maintenance requirements. This plan shall be maintained on site, provided to Department personnel upon request, and submitted to the Department upon completion. [40 CFR §63.6 and Regulation 19, §19.304]

35. The permittee shall comply with all notification requirements including initial notifications, notification of performance tests, continuous monitoring system

performance evaluations, and source compliance status. [40 CFR §63.9 and Regulation 19, §19.304]

36. The permittee shall maintain the following records in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63 Subpart S. These records shall be maintained on site and provided to Department personnel upon request. [40 CFR §63.10 and Regulation 19, §19.304]
    a. Startup, Shutdown, Malfunction, and Maintenance Records
    b. Continuous Monitoring System Records

37. The permittee shall submit the following reports on a semi-annual basis to the Department in order to demonstrate compliance with the applicable provisions of 40 CFR Part 63 Subpart S. [40 CFR §63.10 and Regulation 19, §19.304]
    a. Excess Emissions Reports
    b. Monitoring System Performance Reports
    c. Startup, Shutdown, and Malfunction Reports

NESHAP Subpart JJJJ

38. The facility is subject to and shall comply with applicable provisions of 40 CFR Part 63, Subpart JJJJ – *National Emission Standards for Hazardous Air Pollutants for Paper and Other Web Coating*. A copy of Subpart JJJJ is provided in Appendix H. Applicable provisions include, but are not limited to, those specified in the following conditions.

39. The permittee shall limit organic HAP emissions to no more than 4 percent of the mass of coating materials applied each month. [Regulation No. 19 §19.304 and 40 CFR §63.3320(b)(2)]

40. The permittee shall determine compliance with the emission standards in Plantwide Condition #39 (§63.3320 (b)(2)) by determining the organic HAP mass fraction of each coating material “as-purchased.” The permittee shall use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the owner or operator by the manufacturer of the material. In the event of an inconsistency between Method 311 (appendix A of 40 CFR part 63) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used. [Regulation No. 19 §19.304 and 40 CFR §63.3360(c)(3)]

41. The permittee shall demonstrate continuous compliance by maintaining records on site in accordance with §63.3410(a)(1) to document each coating as-purchased meets the limit in Plantwide Condition #39. [Regulation No. 19 §19.304 and 40 CFR §63.3370(b)]

42. The permittee shall not produce in excess of 676,262 air dried tons of unbleached pulp per twelve consecutive months from the kraft pulp process. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

43. The permittee shall maintain records which demonstrate compliance with the limits listed in Plantwide Condition #42. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request and may be used by the Department for enforcement purposes. A 12-month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [Regulation 19, §19.705, 40 CFR Part 52 Subpart E, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

NESHAP Subpart DDDDD

44. The facility is subject to and shall comply with applicable provisions of 40 CFR Part 63, Subpart DDDDD—*National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*. The Bark Boiler (SN-01) is an existing source classified as a hybrid suspension grate boiler designed to burn biomass/bio-based solids. The No. 1 Power Boiler (SN-13) is an existing source classified as a unit designed to burn gas 1. The No. 2 Power Boiler (SN-15) is an existing source classified as a limited use boiler. A copy of Subpart DDDDD is provided in Appendix K. Applicable provisions include, but are not limited to, those specified in the following conditions. [Reg.19.304 and 40 C.F.R. § 63, Subpart DDDDD]

45. The Bark Boiler (SN-01) shall meet the definition of a hybrid suspension grate boiler as defined in § 63.7575. The moisture content in the biomass fuel combusted in the Bark Boiler (SN-01) shall be greater than 40 percent on an as-fired annual heat input basis. Compliance with this condition shall be demonstrated by monthly fuel analysis. [Reg.19.304 and 40 C.F.R. § 63.7575]

46. The No. 2 Power Boiler (SN-15) shall meet the definition of a limited-use boiler as defined in § 63.7575. The annual capacity factor for the boiler shall not exceed 10 percent. The annual capacity factor is the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity. [Reg.19.304 and 40 C.F.R. § 63.7575]

47. You must meet the following requirements, except as provided in Plantwide Conditions #48 through #50. You must meet these requirements at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7500(a) and (f)]

a. You must meet each emission limit and work practice standard in Table 2 to Subpart DDDDD that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under §63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Table 2 to Subpart DDDDD are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Table 2 to Subpart DDDDD are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using equation 21 of §63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Table 2 to Subpart DDDDD.
b. You must meet each operating limit in Table 4 to Subpart DDDDD that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to Subpart DDDDD, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under §63.8(f).
c. At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

48. As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in Plantwide Condition #47. [Reg.19.304 and 40 C.F.R. § 63.7500(b)]

49. SN-15 must complete a tune-up every 5 years as specified in Plantwide Conditions #117 through #139. SN-15 is not subject to the emission limits in Table 2 to Subpart DDDDD, the annual tune-up, or the energy assessment requirements in Table 3 to Subpart DDDDD, or the operating limits in Table 4 Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7500(c)]

50. SN-13 is not subject to the emission limits in Table 2 to Subpart DDDDD, or the operating limits in Table 4 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7500(e)]

51. You must be in compliance with the emission limits, work practice standards, and operating limits in Subpart DDDDD. These emission and operating limits apply to you at all times the affected unit is operating except during periods of startup and shutdown. [Reg.19.304 and 40 C.F.R. § 63.7505(a)]

52. You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to Plantwide Conditions #104 through #109 is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Table 2 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7505(c)]

53. If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the following requirements for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f). [Reg.19.304 and 40 C.F.R. § 63.7505(d)]

    a. For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Department for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in §63.8(d) and the elements described in the following section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of Plantwide Conditions #77 through #88. Using the process described in §63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

        i. Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);
        ii. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and
        iii. Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

b. In your site-specific monitoring plan, you must also address the following items.

   i. Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);
   ii. Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and
   iii. Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c) (as applicable in Table 10 Subpart DDDDD), (e)(1), and (e)(2)(i).

c. You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.
d. You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

54. For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Table 2 to Subpart DDDDD through performance (stack) testing, your initial compliance requirements include all the following: [Reg.19.304 and 40 C.F.R. § 63.7510(a)]

a. Conduct performance tests according to Plantwide Conditions #66 through #71 and Table 5 to Subpart DDDDD.
b. Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to Plantwide Conditions #72 through #76 and Table 6 to Subpart DDDDD, except as specified in the following section.

   i. For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to Plantwide Conditions #72 through #76 and Table 6 to Subpart DDDDD. For purposes of Subpart DDDDD, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under Plantwide Conditions #72 through #76 and Table 6 to Subpart DDDDD.
   ii. When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to Plantwide Conditions #72 through #76 and Table 6 to Subpart DDDDD. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to Plantwide Conditions #72 through #76 and Table 6 to Subpart DDDDD.

iii. You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in items (i) and (ii) above.

c. Establish operating limits according to Plantwide Conditions #89 through #112 and Table 7 to Subpart DDDDD.

d. Conduct CMS performance evaluations according to Plantwide Conditions #77 through #88.

55. For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Table 2 to Subpart DDDDD for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to Plantwide Conditions #72 through #76 and Table 6 to Subpart DDDDD and establish operating limits according to Plantwide Conditions #89 through #112 and Table 8 to Subpart DDDDD. The fuels described in Plantwide Conditions #54(b)(i) and #54(b)(ii) are exempt from these fuel analysis and operating limit requirements. The fuels described in Plantwide Condition #54.b.ii are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in Plantwide Condition #54 for the HAP for which CEMS are used. [Reg.19.304 and 40 C.F.R. § 63.7510(b)]

56. If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to Subpart DDDDD or conduct a performance evaluation of your continuous CO monitor, if applicable, according to Plantwide Condition #76. Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Table 2 to Subpart DDDDD, as specified in Plantwide Condition #76, are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in Plantwide Condition #54. [Reg.19.304 and 40 C.F.R. § 63.7510(c)]

57. If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with Plantwide Conditions #66 through #71 and Table 5 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7510(d)]

58. For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstrations, as specified in Plantwide Conditions #54 through #57, no later than 180 days after January 31, 2016 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to Subpart DDDDD. You must complete an initial tune-up by following the procedures described in Plantwide Condition #127 no later than January 31, 2016. You must complete the one-time energy assessment specified in Table

3 to Subpart DDDDD no later than January 31, 2016. [Reg.19.304 and 40 C.F.R. § 63.7510(e)]

59. You must conduct all applicable performance tests according to Plantwide Conditions #66 through #71 on an annual basis, except as specified in Plantwide Conditions #60 through #63. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in Plantwide Conditions #60 through #63. [Reg.19.304 and 40 C.F.R. § 63.7515(a)]

60. If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Table 2 to Subpart DDDDD, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under §63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM. [Reg.19.304 and 40 C.F.R. § 63.7515(b)]

61. If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Table 2 to Subpart DDDDD) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Table 2 to Subpart DDDDD). [Reg.19.304 and 40 C.F.R. § 63.7515(c)]

62. If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to Plantwide Condition #127 , #128, or #129 respectively. Each annual tune-up specified in Plantwide Condition #127 must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in Plantwide Condition #128 must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in Plantwide Condition #129 must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later. [Reg.19.304 and 40 C.F.R. § 63.7515(d)]

63. If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to Plantwide Conditions #72 through #76 for each type of fuel burned that is subject to an emission limit in Table 2 to Subpart

DDDDD. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in Plantwide Conditions #117 through #139. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on one day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply. [Reg.19.304 and 40 C.F.R. § 63.7515(e)]

64. You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to Plantwide Conditions #89 through #112 and Table 7 to Subpart DDDDD, as applicable. The reports for all subsequent performance tests must include all applicable information required in Plantwide Conditions #146 through #151. [Reg.19.304 and 40 C.F.R. § 63.7515(f)]

65. If you operate a CO CEMS that meets the Performance Specifications outlined in Plantwide Condition #80 to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Table 2 to Subpart DDDDD, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in Plantwide Condition #54. [Reg.19.304 and 40 C.F.R. § 63.7515(i)]

66. You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in §63.7(c). You shall conduct all performance tests under such conditions as the Department specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Department such records as may be necessary to determine the conditions of the performance tests. [Reg.19.304 and 40 C.F.R. § 63.7520(a)]

67. You must conduct each performance test according to the requirements in Table 5 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7520(b)]

68. You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to Subpart DDDDD. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your

operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7520(c)]

69. You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Table 2 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7520(d)]

70. To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates. [Reg.19.304 and 40 C.F.R. § 63.7520(e)]

71. Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level. [Reg.19.304 and 40 C.F.R. § 63.7520(f)]

72. For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in Plantwide Conditions #73 through #76 and Table 6 to Subpart DDDDD, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in Plantwide Conditions #73 through #76and Table 6 to Subpart DDDDD, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Table 2 to Subpart DDDDD. Gaseous and liquid fuels are exempt from the sampling requirements in Plantwide Condition #73 and #74. [Reg.19.304 and 40 C.F.R. § 63.7521(a)]

73. You must develop a site-specific fuel monitoring plan according to the following procedures and requirements, if you are required to conduct fuel analyses as specified in Plantwide Conditions #54 through #58. [Reg.19.304 and 40 C.F.R. § 63.7521(b)]

   a. If you intend to use an alternative analytical method other than those required by Table 6 to Subpart DDDDD, you must submit the fuel analysis plan to the Department for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in Plantwide Condition #54.
   b. You must include the following information in your fuel analysis plan.

      i. The identification of all fuel types anticipated to be burned in each boiler or process heater.
      ii. For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.
      iii. For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from those in Plantwide Condition #73 or #74. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.
      iv. For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.
      v. If you request to use an alternative analytical method other than those required by Table 6 to Subpart DDDDD, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to Subpart DDDDD shall be used until the requested alternative is approved.
      vi. If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to Subpart DDDDD.

74. You must obtain composite fuel samples for each fuel type according to the procedures in the following section, or the methods listed in Table 6 to Subpart DDDDD, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in Plantwide Condition #54, you must obtain a composite fuel sample during each performance test run. [Reg.19.304 and 40 C.F.R. § 63.7521(c)]

a. If sampling from a belt (or screw) feeder, collect fuel samples according to the following requirements.

   i. Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.
   ii. Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing.

b. If sampling from a fuel pile or truck, you must collect fuel samples according to the following requirements.

   i. For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.
   ii. At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.
   iii. You must transfer all samples to a clean plastic bag for further processing.

75. You must prepare each composite sample according to the following procedures. [Reg.19.304 and 40 C.F.R. § 63.7521(d)]

a. You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.
b. You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.
c. You must make a pie shape with the entire composite sample and subdivide it into four equal parts.
d. You must separate one of the quarter samples as the first subset.
e. If this subset is too large for grinding, you must repeat the procedure in section (d) above with the quarter sample and obtain a one-quarter subset from this sample.
f. You must grind the sample in a mill.
g. You must use the procedure in section (c) above to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

76. You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to Subpart DDDDD, for use in Equations 7, 8, and 9 of Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7521(e)]

77. If your boiler or process heater is subject to a CO emission limit in Table 2 to Subpart DDDDD, you must install, operate, and maintain an oxygen analyzer system, as defined

in §63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide (CO_2)) according to the procedures in Plantwide Conditions #78 through #83. [Reg.19.304 and 40 C.F.R. § 63.7525(a)]

78. Install the CO CEMS and oxygen (or CO_2) analyzer by January 31, 2016. The CO and oxygen (or CO_2) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the CO emissions limit be determined using CO_2 as a diluent correction in place of oxygen at 3 percent. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. [Reg.19.304 and 40 C.F.R. § 63.7525(a)(1)]

79. To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Table 2 to Subpart DDDDD, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter (if an CO_2 analyzer is used); the site-specific monitoring plan developed according to Plantwide Condition #53; and the requirements in Plantwide Condition #125 and Plantwide Conditions #77 through #84. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to Plantwide Condition #53, and the requirements in Plantwide Condition #125 and Plantwide Conditions #77 through #84 must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Table 2 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7525(a)(2)]

   a. You must conduct a performance evaluation of each CO CEMS according to the requirements in §63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.
   b. During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.
   c. You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.
   d. Any CO CEMS that does not comply with Plantwide Conditions #77 through #84 cannot be used to meet any requirement in Subpart DDDDD to demonstrate compliance with a CO emission limit listed in Table 2 to Subpart DDDDD.

e. For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

f. When CO_2 is used to correct CO emissions and CO_2 is measured on a wet basis, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: A continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O_2 both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, i.e., a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (e.g., hourly average wet- and dry basis O_2 values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

80. Complete a minimum of one cycle of CO and oxygen (or CO_2) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO_2) data concurrently. Collect at least four CO and oxygen (or CO_2) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed. [Reg.19.304 and 40 C.F.R. § 63.7525(a)(3)]

81. Reduce the CO CEMS data as specified in §63.8(g)(2). [Reg.19.304 and 40 C.F.R. § 63.7525(a)(4)]

82. Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to an CO_2 percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values. [Reg.19.304 and 40 C.F.R. § 63.7525(a)(5)]

83. For purposes of collecting CO data, operate the CO CEMS as specified in Plantwide Condition #114. You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in Plantwide Condition #115. Periods when CO data are unavailable may constitute monitoring deviations as specified in Plantwide Condition #116. [Reg.19.304 and 40 C.F.R. § 63.7525(a)(6)]

84. Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7525(a)(7)]

85. If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the following procedures by January 31, 2016. [Reg.19.304 and 40 C.F.R. § 63.7525(d)]

    a. The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.
    b. You must operate the monitoring system as specified in Plantwide Condition #114, and comply with the data calculation requirements specified in Plantwide Condition #115.
    c. Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in Plantwide Condition #116.
    d. You must determine the 30-day rolling average of all recorded readings, except as provided in Plantwide Condition #115.
    e. You must record the results of each inspection, calibration, and validation check.

86. If you have an operating limit that requires the use of a flow monitoring system, you must meet the following requirements. [Reg.19.304 and 40 C.F.R. § 63.7525(e)]

    a. You must install the flow sensor and other necessary equipment in a position that provides a representative flow.
    b. You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.
    c. You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.
    d. You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

87. If you have an operating limit that requires the use of a pressure monitoring system, you must meet the following requirements. [Reg.19.304 and 40 C.F.R. § 63.7525(f)]

    a. Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

b. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.
c. Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.
d. Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).
e. Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.
f. If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

88. For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating. [Reg.19.304 and 40 C.F.R. § 63.7525(k)]

89. You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to Plantwide Conditions #66 through #71, Plantwide Conditions #90 through #109, and Tables 5 and 7 to Subpart DDDDD. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by Plantwide Condition #54. If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to Plantwide Conditions #77 through #88. [Reg.19.304 and 40 C.F.R. § 63.7530(a)]

90. If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to Subpart DDDDD that applies to you according to the requirements in Plantwide Conditions #66 through #71, Table 7 to Subpart DDDD, and Plantwide Conditions #94 through #103, as applicable. You must also conduct fuel analyses according to Plantwide Conditions #72 through #76 and establish maximum fuel pollutant input levels according to Plantwide Conditions #91 through #93, as applicable, and as specified in Plantwide Condition #54. (Note that Plantwide Condition #54 exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s). [Reg.19.304 and 40 C.F.R. § 63.7530(b)]

91. You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the following procedures. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(1)]

   a. You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.
   b. During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).
   c. You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:
Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.
Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to Plantwide Conditions #72 through #76, in units of pounds per million Btu.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

92. You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the following procedures. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(2)]

   a. You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.
   b. During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).
   c. You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:
Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.
HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to Plantwide Conditions #72 through #76, in units of pounds per million Btu.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during

the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

93. If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the following procedures. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(3)]

a. You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.
b. During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).
c. You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:
TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.
TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to Plantwide Conditions #72 through #76, in units of pounds per million Btu.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

94. You must establish parameter operating limits according to Plantwide Conditions #95 through #103. As indicated in Table 4 to Subpart DDDDD, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)]

95. For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in §63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(i)]

96. For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to the following section. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(ii)]

   a. Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

      i. Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.
      ii. Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.
      iii. During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

   b. If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the following procedures.

      i. Determine your instrument zero output with one of the following procedures:

         1. Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

2. Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.
3. The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.
4. If none of the steps in items (1) through (3) above are possible, you must use a zero output value provided by the manufacturer.

ii. Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:
X_1 = the PM CPMS data points for the three runs constituting the performance test,
Y_1 = the PM concentration value for the three runs constituting the performance test, and
n = the number of data points.

iii. With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:
R = the relative lb/MMBtu per milliamp for your PM CPMS,
Y_1 = the three run average lb/MMBtu PM concentration,
X_1 = the three run average milliamp output from you PM CPMS, and
z = the milliamp equivalent of your instrument zero determined from (B)(i).

iv. Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:
O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.
L = your source emission limit expressed in lb/MMBtu,
z = your instrument zero in milliamps, determined from (B)(i), and
R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

c. If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in section f of this condition.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:
X_1 = the PM CPMS data points for all runs i,
n = the number of data points, and
O_h = your site specific operating limit, in milliamps.

d. To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

Where:
30-day = 30-day average.
Hpvi = is the hourly parameter value for hour i
n = is the number of valid hourly parameter values collected over the previous 30 operating days.

e. Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Table 2 to Subpart DDDDD, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers ("back half") of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of Subpart DDDDD. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

f. For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

97. For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in §63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If

you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(iii)]

98. For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.) [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(iv)]

99. For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(v)]

100. For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(vi)]

101. The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in Plantwide Conditions #77 through #88, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(vii)]

102. For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(viii)]

103. The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in §63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl. [Reg.19.304 and 40 C.F.R. § 63.7530(b)(4)(ix)]

104. If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to Plantwide Conditions #72 through

#76 and follow the procedures in Plantwide Conditions #105 through #109. [Reg.19.304 and 40 C.F.R. § 63.7530(c)]

105. If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis. [Reg.19.304 and 40 C.F.R. § 63.7530(c)(1)]

106. You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section. [Reg.19.304 and 40 C.F.R. § 63.7530(c)(2)]

$$P90 = mean + (SD \times t) \quad \text{(Eq. 15)}$$

Where:
P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.
Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to Plantwide Conditions #72 through #76, in units of pounds per million Btu.
SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to Plantwide Conditions #72 through #76, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.
t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

107. To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl. [Reg.19.304 and 40 C.F.R. § 63.7530(c)(3)]

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \quad \text{(Eq. 16)}$$

Where:
HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.
Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.
1.028 = Molecular weight ratio of HCl to chlorine.

108. To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury. [Reg.19.304 and 40 C.F.R. § 63.7530(c)(4)]

$$Mercury = \sum_{i=1}^{n} (Hgi90 \times Qi) \quad \text{(Eq. 17)}$$

Where:
Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

109. To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM. [Reg.19.304 and 40 C.F.R. § 63.7530(c)(5)]

$$Metals = \sum_{i=1}^{n} \left(TSM90i \times Qi \right) \qquad \text{(Eq. 18)}$$

Where:
Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.
TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

110. You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to Subpart DDDDD, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended. [Reg.19.304 and 40 C.F.R. § 63.7530(e)]

111. You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in Plantwide Condition #143. [Reg.19.304 and 40 C.F.R. § 63.7530(f)]

112. If you own or operate a unit subject to emission limits in Table 2 to Subpart DDDDD, you must meet the work practice standard according to Table 3 of Subpart DDDDD. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7530(h)]

113. You must monitor and collect data according to this section and the site-specific monitoring plan required by Plantwide Condition #53. [Reg.19.304 and 40 C.F.R. § 63.7535(a)]

114. You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see §63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable. [Reg.19.304 and 40 C.F.R. § 63.7535(b)]

115. You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system. [Reg.19.304 and 40 C.F.R. § 63.7535(c)]

116. Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report. [Reg.19.304 and 40 C.F.R. § 63.7535(d)]

117. You must demonstrate continuous compliance with each emission limit in Table 2 to Subpart DDDDD, the work practice standards in Table 3 to Subpart DDDDD, and the operating limits in Table 4 to Subpart DDDDD that applies to you according to the methods specified in Table 8 to Subpart DDDDD and Plantwide Conditions #118 through #136. [Reg.19.304 and 40 C.F.R. § 63.7540(a)]

118. Following the date on which the initial compliance demonstration is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first,

operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of Subpart DDDDD except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(1)]

119. As specified in Plantwide Condition #155, you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following: [Reg.19.304 and 40 C.F.R. § 63.7540(a)(2)]

    a. Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.
    b. Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

120. If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of Plantwide Condition #107 according to the following procedures. You are not required to conduct fuel analyses for the fuels described in Plantwide Condition #54. You may exclude the fuels described in Plantwide Condition #54 when recalculating the HCl emission rate. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(3)]

    a. You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to Plantwide Condition #73.
    b. You must determine the new mixture of fuels that will have the highest content of chlorine.
    c. Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of Plantwide Condition #107. The recalculated HCl emission rate must be less than the applicable emission limit.

121. If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of Plantwide Condition #91. If the results of recalculating the maximum chlorine input using Equation 7 of Plantwide Condition #91are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in Plantwide Conditions #66 through #71 to demonstrate that the HCl

emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in Plantwide Conditions #90 through #103. In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in Plantwide Condition #54. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(4)]

122. If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of Plantwide Condition #108 according to the following procedures. You are not required to conduct fuel analyses for the fuels described in Plantwide Condition #54. You may exclude the fuels described in Plantwide Condition #54 when recalculating the mercury emission rate. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(5)]

    a. You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to Plantwide Condition #73.
    b. You must determine the new mixture of fuels that will have the highest content of mercury.
    c. Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of Plantwide Condition #108. The recalculated mercury emission rate must be less than the applicable emission limit.

123. If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of Plantwide Condition #92. If the results of recalculating the maximum mercury input using Equation 8 of Plantwide Condition #92 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in Plantwide Conditions #66 through #71 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in Plantwide Conditions #90 through #103. You are not required to conduct fuel analyses for the fuels described in Plantwide Condition #54. You may exclude the fuels described in Plantwide Condition #54 when recalculating the mercury emission rate. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(6)]

124. If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must

also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(7)]

125. To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Table 2 to Subpart DDDDD, you must meet the following requirements. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(8)]

    a. Continuously monitor CO according to Plantwide Conditions #77 through 84 and #113 through #116.
    b. Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Table 2 to Subpart DDDDD at all times the affected unit is subject to numeric emission limits.
    c. Keep records of CO levels according to Plantwide Condition #153.
    d. You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

126. The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of Subpart DDDDD shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in §63.7505(d). [Reg.19.304 and 40 C.F.R. § 63.7540(a)(9)]

127. If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in the following section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(10)]

    a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;
d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;
e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
f. Maintain on-site and submit, if requested by the Department, a report containing the following information,

    i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
    ii. A description of any corrective actions taken as a part of the tune-up; and
    iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

128. If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in Plantwide Condition #129), you must conduct a biennial tune-up of the boiler or process heater as specified in Plantwide Condition #127 to demonstrate continuous compliance. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(11)]

129. If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in Plantwide Condition #127 to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph Plantwide Condition #127 until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is

utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(12)]

130. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(13)]

131. If you are using a CEMS measuring mercury emissions to meet requirements of Subpart DDDDD you must install, certify, operate, and maintain the mercury CEMS as specified in the following section. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(14)]

    a. Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in Plantwide Condition #143(b)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in Plantwide Condition #143(b)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.
    b. If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

132. If you are using a CEMS to measure HCl emissions to meet requirements of Subpart DDDDD, you must install, certify, operate, and maintain the HCl CEMS as specified in the following section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(15)]

    a. Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in Plantwide Condition #143(b)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in Plantwide Condition #143(b)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.
    b. If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable

performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

133. If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of Plantwide Condition #93. If the results of recalculating the maximum TSM input using Equation 9 of Plantwide Condition #93 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in Plantwide Conditions #66 through #71 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in Plantwide Conditions #90 through #103. You are not required to conduct fuel analyses for the fuels described in Plantwide Condition #54. You may exclude the fuels described in Plantwide Condition #54 when recalculating the TSM emission rate. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(16)]

134. If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of Plantwide Condition #109 according to the following procedures. You are not required to conduct fuel analyses for the fuels described in Plantwide Condition #54. You may exclude the fuels described in Plantwide Condition #54 when recalculating the TSM emission rate. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(17)]

   a. You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to Plantwide Condition #73.
   b. You must determine the new mixture of fuels that will have the highest content of TSM.
   c. Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of Plantwide Condition #109. The recalculated TSM emission rate must be less than the applicable emission limit.

135. If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 to Subpart DDDDD. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(18)]

a. To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

b. For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

    i. Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

    ii. If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

    iii. Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

c. PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of Subpart DDDDD.

136. If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in the following section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Table 2 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7540(a)(19)]

a. Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

b. Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

    i. You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.
    ii. You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

c. Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.
d. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.
e. You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.
f. You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

    i. Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;
    ii. Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;
    iii. Any data recorded during periods of startup or shutdown.

g. You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

137. You must report each instance in which you did not meet each emission limit and operating limit in Tables 2 through 4 to Subpart DDDDD that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in Subpart DDDDD. These deviations must be reported according to the requirements in Plantwide Conditions #146 through #151. [Reg.19.304 and 40 C.F.R. § 63.7540(b)]

138. If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in

the following section and conduct this sampling according to the procedures in §63.7521(f) through (i). [Reg.19.304 and 40 C.F.R. § 63.7540(c)]

a. If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in §63.7575, you do not need to conduct further sampling.
b. If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in §63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.
c. If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in §63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.
d. If the initial sample exceeds the mercury specification as defined in §63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in §63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

139. For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7540(d)]

140. You must submit to the Department all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified. [Reg.19.304 and 40 C.F.R. § 63.7545(a)]

141. As specified in §63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013. [Reg.19.304 and 40 C.F.R. § 63.7545(b)]

142. 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. [Reg.19.304 and 40 C.F.R. § 63.7545(c)]

143. If you are required to conduct an initial compliance demonstration as specified in Plantwide Conditions #89 through #112, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the following information, as applicable. If you are not required to conduct an initial compliance demonstration as specified in Plantwide Condition #89, the Notification of Compliance Status must only contain the following information and must be submitted within 60 days of the compliance date specified at §63.7495(b). [Reg.19.304 and 40 C.F.R. § 63.7545(e)]

a. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with Subpart DDDDD, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under §241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of §241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.
b. Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

    i. Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.
    ii. Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,
    iii. Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

c. A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Table 2 to Subpart DDDDD, if you are not using a CO CEMS to demonstrate compliance.
d. Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.
e. Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

        i. If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

    f. A signed certification that you have met all applicable emission limits and work practice standards.
    g. If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.
    h. In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

        i. "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi)."
        ii. "This facility has had an energy assessment performed according to §63.7530(e)."
        iii. Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit."

144. If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to Subpart DDDDD, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the following information. [Reg.19.304 and 40 C.F.R. § 63.7545(f)]

    a. Company name and address.
    b. Identification of the affected unit.
    c. Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.
    d. Type of alternative fuel that you intend to use.
    e. Dates when the alternative fuel use is expected to begin and end.

145. If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical

change within 30 days of the switch/change. The notification must identify: [Reg.19.304 and 40 C.F.R. § 63.7545(h)]

a. The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.
b. The currently applicable subcategory under Subpart DDDDD.
c. The date upon which the fuel switch or physical change occurred.

146. You must submit each report in Table 9 to Subpart DDDDD that applies to you. [Reg.19.304 and 40 C.F.R. § 63.7550(a)]

147. Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to Plantwide Condition #151, by the date in Table 9 to Subpart DDDDD and according to the following requirements. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to Plantwide Conditions #127, #128, or #129, respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, instead of a semi-annual compliance report. [Reg.19.304 and 40 C.F.R. § 63.7550(b)]

a. The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.
b. The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.
c. Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.
d. Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

e. For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in sections (a) through (d) above.

148. A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule. [Reg.19.304 and 40 C.F.R. § 63.7550(c)]

a. If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in items (i) through (iii), (xiv), and (xvii) of section (e) below, and item (iv) of section (e) below for limited-use boiler or process heater.
b. If you are complying with the fuel analysis you must submit a compliance report with the information in items (i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) of section (e) below and Plantwide Condition #149.
c. If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in items (i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) of section (e) below and Plantwide Condition #149.
d. If you are complying with an emissions limit using a CMS the compliance report must contain the information required in items(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii) of section (e) below and Plantwide Condition #150.
e.
    i. Company and Facility name and address.
    ii. Process unit information, emissions limitations, and operating parameter limitations.
    iii. Date of report and beginning and ending dates of the reporting period.
    iv. The total operating time during the reporting period.
    v. If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.
    vi. The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.
    vii. If you are conducting performance tests once every 3 years consistent with Plantwide Condition #60 or #61, the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

viii. A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of Plantwide Condition #91, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of Plantwide Condition #107 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of Plantwide Condition #92, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of Plantwide Condition #108 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of Plantwide Condition #93, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of Plantwide Condition #109, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

ix. If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of Plantwide Condition #91 or the maximum mercury input operating limit using Equation 8 of Plantwide Condition #92, or the maximum TSM input operating limit using Equation 9 of Plantwide Condition #93 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

x. A summary of any monthly fuel analyses conducted to demonstrate compliance according to Plantwide Conditions #72 through #76 and Plantwide Conditions #89 through #112 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§63.7521(f) and 63.7530(g).

xi. If there are no deviations from any emission limits or operating limits in Subpart DDDDD that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.
xii. If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in §63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.
xiii. If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with Plantwide Condition #47(c), including actions taken to correct the malfunction.
xiv. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to Plantwide Condition #127, #128, or #129 respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.
xv. If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in Plantwide Condition #143(e).
xvi. For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO_2, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.
xvii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
xviii. For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of Plantwide Condition #155.

149. For each deviation from an emission limit or operating limit in Subpart DDDDD that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the following information. [Reg.19.304 and 40 C.F.R. § 63.7550(d)]

a. A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.
b. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
c. If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

150. For each deviation from an emission limit, operating limit, and monitoring requirement in Subpart DDDDD occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the following information. This includes any deviations from your site-specific monitoring plan as required in §63.7505(d). [Reg.19.304 and 40 C.F.R. § 63.7550(e)]

a. The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).
b. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.
c. The date, time, and duration that each CMS was out of control, including the information in §63.8(c)(8).
d. The date and time that each deviation started and stopped.
e. 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.
f. A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
g. A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.
h. A brief description of the source for which there was a deviation.
i. A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

151. You must submit the reports according to the following requirements. [Reg.19.304 and 40 C.F.R. § 63.7550(h)]

a. Within 60 days after the date of completing each performance test (as defined in §63.2) required by Subpart DDDDD, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either item (i) or (ii) below.

    i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*http://www.epa.gov/ttn/chief/ert/index.html*), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Department at the appropriate address listed in §63.13.

b. Within 60 days after the date of completing each CEMS performance evaluation (as defined in §63.2), you must submit the results of the performance evaluation following the procedure specified in either item (i) or (ii) below.

   i. For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

   ii. For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Department at the appropriate address listed in §63.13.

c. You must submit all reports required by Table 9 of Subpart DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for Subpart DDDDD. Instead of using the electronic report in CEDRI for Subpart DDDDD, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to Subpart DDDDD is not available in CEDRI at the time that the report is due, you must submit the report to the Department at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

152. You must keep records according to the following requirements. [Reg.19.304 and 40 C.F.R. § 63.7555(a)]

a. A copy of each notification and report that you submitted to comply with Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).
b. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).
c. For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

153. For each CEMS, COMS, and continuous monitoring system you must keep records according to the following requirements. [Reg.19.304 and 40 C.F.R. § 63.7555(b)]

a. Records described in §63.10(b)(2)(vii) through (xi).
b. Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii).
c. Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
d. Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).
e. Records of the date and time that each deviation started and stopped.

154. You must keep the records required in Table 8 to Subpart DDDDD including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you. [Reg.19.304 and 40 C.F.R. § 63.7555(c)]

155. For each boiler or process heater subject to an emission limit in Table 2 to Subpart DDDDD, you must also keep all of the following records that are applicable to you. [Reg.19.304 and 40 C.F.R. § 63.7555(d)]

a. You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.
b. If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in §241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under §241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this section.
c. A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of Plantwide Condition #91, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of Plantwide Condition #107, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.
d. A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of Plantwide Condition #92, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that

demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of Plantwide Condition #108, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

e. If, consistent with Plantwide Condition #60, you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Table 2 to Subpart DDDDD, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.
f. Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.
g. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Plantwide Condition #47(c), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.
h. A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of Plantwide Condition #93, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of Plantwide Condition #109, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.
i. You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.
j. You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.
k. For each startup period, for units selecting paragraph (2) of the definition of “startup” in §63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels;

the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

l. If you choose to rely on paragraph (2) of the definition of “startup” in §63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (*e.g.*, CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records according to the following requirements.

    i. For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.
    ii. For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.
    iii. For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

m. If you choose to use paragraph (2) of the definition of “startup” in §63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in §63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

    i. The request shall provide evidence of a documented manufacturer-identified safety issue.
    ii. The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.
    iii. In addition, the request shall contain documentation that:

        1. The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;
        2. The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and
        3. Identifies with specificity the details of the manufacturer's statement of concern.

iv. You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

156. If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to Subpart DDDDD, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies. [Reg.19.304 and 40 C.F.R. § 63.7555(h)]

157. Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). [Reg.19.304 and 40 C.F.R. § 63.7560(a)]

158. 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. [Reg.19.304 and 40 C.F.R. § 63.7560(b)]

159. You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years. [Reg.19.304 and 40 C.F.R. § 63.7560(c)]

160. Table 10 to Subpart DDDDD shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. [Reg.19.304 and 40 C.F.R. § 63.7565]

Permit Shield

161. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated May 9, 1996 and subsequent correspondence.

Applicable Regulations

Source No.	Regulation	Description
Facility	Arkansas Regulation #19 except as designated in the Compliance Plan	Regulations of the Arkansas State Implementation Plan for Air Pollution Control
Facility	Arkansas Regulation #26	Regulations of the Arkansas Operating Permit Program
Facility	40 CFR Part 63 Subpart S	The Cluster Rule

Source No.	Regulation	Description
SN-55	40 CFR Part 60 Subpart Kb	New Source Performance Standard for Volatile Organic Liquid Storage Vessels
SN-51	40 CFR Part 60 Subpart BB	Standards of Performance for Kraft Pulp Mills
SN-02 thru SN-04 & SN-06 thru SN-10	40 CFR Part 63 Subpart MM	National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills
SN-28 thru SN-42	40 CFR Part 63 Subpart JJJJ	National Emission Standards for Hazardous Air Pollutants for Paper and Other Web Coating Sources

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated May 9, 1996 and subsequent correspondence.

Inapplicable Regulations

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
New Source Performance Standards for Fossil Fuel-Fired Generators	40 CFR Part 60 Subpart D	SN-01	Converted in 1968.
Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	40 CFR Part 60 Subpart Db	SN-01	Converted in 1968.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-02	Built in 1958.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-03	Built in 1959.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-04	Built in 1968.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-06	Built in 1958.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-07	Built in 1959.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-08	Built in 1968.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-09	Built in 1958.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-10	Built in 1959.
New Source Performance Standards for Fossil Fuel-Fired Generators	40 CFR Part 60 Subpart D	SN-13	Installed in 1958.

Description of Regulation	**Regulatory Citation**	**Affected Source**	**Basis for Determination**
Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	40 CFR Part 60 Subpart Db	SN-13	Installed in 1958.
New Source Performance Standards for Fossil Fuel-Fired Generators	40 C.F.R. Part 60 Subpart D	SN-15	Installed in 1958.
Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	40 CFR Part 60 Subpart Db	SN-15	Installed in 1958.
Standards of Performance for Kraft Pulp Mills	40 CFR Part 60 Subpart BB	SN-22, 23, 44	Pre-1976. No NSPS modification.

a. Nothing shall alter or affect the following:
   - i Provisions of Section 303 of the Clean Air Act;
   - ii The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;
   - iii The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; or
   - iv The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

Plantwide Applicability Limitation (PAL)

162. The permittee shall not exceed the emission rates set forth in the following table from the entire facility during any consecutive 12-month period. Emissions during periods of startup, shutdown, and malfunction shall be counted towards the limit during the 12-month period. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition #163. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)]

Pollutant	tpy
PM	1143.8
PM_{10}	836.1
$PM_{2.5}$	726.1
NOx	1458.1
CO	2041.1
SO_2	392.4

Pollutant	tpy
VOC	1913.4
TRS	833.4
Lead	0.690
H_2SO_4	17.07
Fluorides	3.016
CO_2e	1969346.7

163. The permittee shall keep monthly records of all monitoring data required to calculate emissions for all pollutants listed in Plantwide Condition #162 (including emissions from Insignificant Activities) and provide documentation showing the calculation procedures used to convert these records to monthly emissions and 12-month rolling total emissions. These records and documentation shall be consistent with the development procedures used to create the limits. For each month during the first 11 months from the issuance date of permit #0580-AOP-R11, the permittee shall show that the sum of the preceding monthly emissions from the issuance date of permit #0580-AOP-R11for all sources is less than the limit set in Plantwide Condition #162. For each month after the first 12 months from the issuance date of permit #0580-AOP-R11, the permittee shall show that the sum of the monthly emissions from all sources for the previous 12 consecutive months is less than the limit set in Plantwide Condition #162. These records shall be updated on the 15th day of each month for the previous month and made available to Department personnel upon request. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(4)]

164. The permittee shall maintain documentation of the emission factors used to demonstrate compliance with Plantwide Condition #162. Emission factors must be obtained from the most recent edition of AP-42, Compilation of Air Pollutant Emission Factors, the most recent stack performance test results, a mass balance approach using the Material Safety Data Sheet (MSDS) of all materials, factors developed by the National Council of Air and Stream Improvement (NCASI), and/or by a method approved by the Department. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(12)]

165. The permittee shall maintain documentation of any control efficiencies utilized in the emission calculations and shall list these efficiencies in the records required by Plantwide Condition #163. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(12)]

166. The permittee shall record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(12)]

167. The permittee shall conduct an initial performance test on any future control equipment installed to maintain compliance with the PAL. The permittee may perform another scientific demonstration approved by the Department to validate the accuracy of the emission factor. Testing shall be performed in accordance with Plantwide Condition #3. Such testing must occur at least once every 5 years thereafter. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(12)]

168. The permittee may perform any physical change or change in the method of operation at the facility provided that:

   a. The permittee maintains that the total source-wide emissions are below the limit specified in Plantwide Condition #162;
   b. It is not considered a modification subject to permitting action under Regulation 19 or Regulation 26; and
   c. The permittee complies with the provisions of Regulation 26, §26.802.

After all physical changes or changes in methods of operation, the permittee shall document and maintain records specified in Plantwide Condition #163 to demonstrate that the post-change emissions comply with the limits established by Plantwide Condition #162. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(1)]

169. The permittee may submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary or GHG-only source's emissions to equal or exceed its PAL. As part of this application, the permittee shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply. The permittee shall obtain a major NSR permit for all affected emissions unit(s), regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT), even though they have also become subject to the PAL or continue to be subject to the PAL. The increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(12)]

170. The PAL will expire 10 years after the issuance date of permit #0580-AOP-R11. The permittee may renew the PAL in accordance to Plantwide Condition #176. Otherwise the permittee shall comply with Plantwide Condition #177 after the expiration of the PAL. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(8)]

171. The permittee shall retain a copy of all records necessary to determine compliance with any requirement of 40 CFR §52.21(aa) and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(13)]

172. The permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years: [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(13)]

    a. A copy of the PAL permit application and any applications for revisions to the PAL; and
    b. Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

173. The permittee shall submit a semi-annual report to the Department within 30 days of the end of each reporting period in accordance with General Provision #7. This report shall contain the following information: [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(14)]

    a. The identification of owner and operator and the permit number.
    b. Total annual emissions (expressed on a mass-basis in tons per year, or expressed in tons per year CO_2e) based on a 12-month rolling total for each month in the reporting period recorded pursuant to paragraph (aa)(13)(i) of this section.
    c. All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.
    d. A list of any emissions units modified or added to the major stationary source or GHG-only source during the preceding 6-month period.
    e. The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
    f. A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by 40 CFR §52.21(aa)(12)(vii).

g. A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

174. The permittee shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted according to 40 CFR §70.6(a)(3)(iii)(B) shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits set in 40 CFR §70.6(a)(3)(iii)(B). The reports shall contain the following information: [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(14)]

a. The identification of owner and operator and the permit number;
b. The PAL requirement that experienced the deviation or that was exceeded;
c. Emissions resulting from the deviation or the exceedance; and
d. A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

175. The permittee shall submit to the Department the results of any re-validation test or method within 3 months after completion of such test or method. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(14)]

176. The permittee may submit an application at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration to renew the PAL. If the permittee submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The renewal application shall contain the following information: [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(10)]

a. The information required in 40 CFR §52.21(aa)(3)(i) through (iii)
b. A proposed PAL level.
c. The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).
d. Any other information that the permittee wishes the Department to consider in determining the appropriate level for renewing the PAL.

177. If the PAL is not renewed in accordance with Plantwide Condition #176, the PAL shall expire at the end of the PAL effective period, and the requirements in 40 CFR §52.21(aa)(9)(i) through (v) shall apply. [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(9)]

178. The permittee may request an increase in PAL emission limit only if the permittee complies with the provisions of 40 CFR §52.21(aa)(11)(i)(a) through (d). The permittee shall submit a complete application to request an increase in the PAL limit for a PAL major modification according to 40 CFR§ 52.21(aa)(11). Such application shall identify

the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary or GHG-only source's emissions to equal or exceed its PAL [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(11)]

179. During the PAL effective period, the Department must reopen the PAL permit for the following reasons: [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(8)]

a. Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL;
b. Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under 40 CFR §51.165(a)(3)(ii); and
c. Revise the PAL to reflect an increase in the PAL as provided under paragraph 40 CFR §52.21(aa)(11).

180. The Department shall have discretion to reopen the PAL permit for the following reasons: [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(8)]

a. Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date;
b. Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the State may impose on the major stationary source or GHG-only source under the State Implementation Plan; and
c. Reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.

181. Except for the permit reopening specified in Plantwide Condition #179 for the correction of typographical/calculation errors that do not increase the PAL level, all other reopenings shall be carried out in accordance with the public participation requirements of 40 CFR §52.21(aa)(5). [Regulation 19 §19.901 et seq., 40 CFR Part 52, Subpart E, and 40 CFR §52.21(aa)(8)]

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of Reg.26.304 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated May 30, 2014.

Description	Category
No. 2 Paper Machine Infrared Dryer Set (2.28 MMBtu/hr)	A-1
IC Engine Driven Generators	A-12
IC Engine Driven Pumps	A-13
IC Engine Driven Air Compressors	A-13
Cotton Roll Grinder associated with No. 1 Paper Machine	A-13
Poly Silos associated with Extruders	A-13
Wet Ash Handling	A-13
Starch Silos	A-13
Weak Wash Liquor Storage	A-13
IC Engine Welders	B-14
Soap Storage	B-22
Laboratory Proofing Press	B-34
ECO Latex Binder Storage Silo	A-13
Liquid Dye Mix Tanks	A-13
Outside Media Blasting	A-13

The following storage tanks are insignificant activities (VOC emissions total 0.8 tpy):

Tank Name	Contents	Size (DxH)	Volume (Gal.)	Vapor Pressure	Group
Bulk Tank A-2	Fuel Oil	60 x 40	800,000	4.3 x 10-5 psia @ 60^{o}F	A-13
Bulk Tank G-1	Out of service				
Bulk Tank 0-3 (Underground)	Gasoline	--	1,000	6.9 psia @ 60^{o}F	A-13
Bulk Tank F-1	Oil	--	10,000	<0.1 mm Hg @20^{o}C	A-3
Bulk Tank F-3	Oil	--	6,000	<0.1 mm Hg @20^{o}C	A-3

Tank Name	Contents	Size (DxH)	Volume (Gal.)	Vapor Pressure	Group
Bulk Tank F-4	Oil	--	10,000	0.0085 psia @ 60°F	A-3
Bulk Tank H-1	Diesel Fuel	--	1,500	0.0074 psia @ 60°F	A-3
Bulk Tank K-1	Diesel Fuel	--	2,000	0.0074 psia @ 60°F	A-3
Bulk Tank 0-1	Diesel Fuel	--	6,000	0.0074 psia @ 60°F	A-3
Bulk Tank 0-2	Diesel Fuel	--	6,000	0.0074 psia @ 60°F	A-3
Tanks associated with the Chip Mill					
Gasoline	Gasoline	--	279	6.9 psia @ 60°F	A-13
No. 1 Diesel	No. 1 Diesel	3.5 x 7.75	560.8	0.0074 psia @ 60°F	A-3
No. 2 Diesel	No. 2 Diesel	--	560.8	0.0074 psia @ 60°F	A-3
Hydraulic Oil	Hydraulic Oil	--	1,000	--	A-3
Used Oil	Used Oil	--	1,000	--	A-3

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and Reg.26.701(B)]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee’s right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Reg.26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 C.F.R. § 70.6(a)(1)(ii) and Reg.26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit.

   a. The date, place as defined in this permit, and time of sampling or measurements;
   b. The date(s) analyses performed;
   c. The company or entity performing the analyses;
   d. The analytical techniques or methods used;
   e. The results of such analyses; and
   f. The operating conditions existing at the time of sampling or measurement.

   [40 C.F.R. § 70.6(a)(3)(ii)(A) and Reg.26.701(C)(2)]

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 C.F.R. § 70.6(a)(3)(ii)(B) and Reg.26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Reg.26.2 must certify all required reports. The permittee will send the reports to the address below:

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   5301 Northshore Drive
   North Little Rock, AR 72118-5317

   [40 C.F.R. § 70.6(a)(3)(iii)(A) and Reg.26.701(C)(3)(a)]

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

   a. For all upset conditions (as defined in Reg.19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

      i. The facility name and location;
      ii. The process unit or emission source deviating from the permit limit;
      iii. The permit limit, including the identification of pollutants, from which deviation occurs;
      iv. The date and time the deviation started;
      v. The duration of the deviation;
      vi. The emissions during the deviation;
      vii. The probable cause of such deviations;
      viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and

ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Reg.19.601, Reg.19.602, Reg.26.701(C)(3)(b), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), Reg.26.701(E), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. § 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 C.F.R. § 70.6(a)(6)(i) and Reg.26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 C.F.R. § 70.6(a)(6)(ii) and Reg.26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and Reg.26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and Reg.26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and Reg.26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 C.F.R. § 70.6(a)(7) and Reg.26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 C.F.R. § 70.6(a)(8) and Reg.26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 C.F.R. § 70.6(a)(9)(i) and Reg.26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and Reg.26.702(A) and (B)]

19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in Reg.26.2. [40 C.F.R. § 70.6(c)(1) and Reg.26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and Reg.26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and Reg.26.703(E)(3)]

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    e. Such other facts as the Department may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Reg.26.704(C)]

    a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    c. The applicable requirements of the acid rain program, consistent with § 408(a) of the Act; or
    d. The ability of EPA to obtain information from a source pursuant to § 114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:

    a. Such an extension does not violate a federal requirement;
    b. The permittee demonstrates the need for the extension; and
    c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Reg.18.314(A), Reg.19.416(A), Reg.26.1013(A), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:

    a. Such a request does not violate a federal requirement;
    b. Such a request is temporary in nature;
    c. Such a request will not result in a condition of air pollution;
    d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
    e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
    f. The permittee maintains records of the dates and results of such temporary emissions/testing.

    [Reg.18.314(B), Reg.19.416(B), Reg.26.1013(B), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:

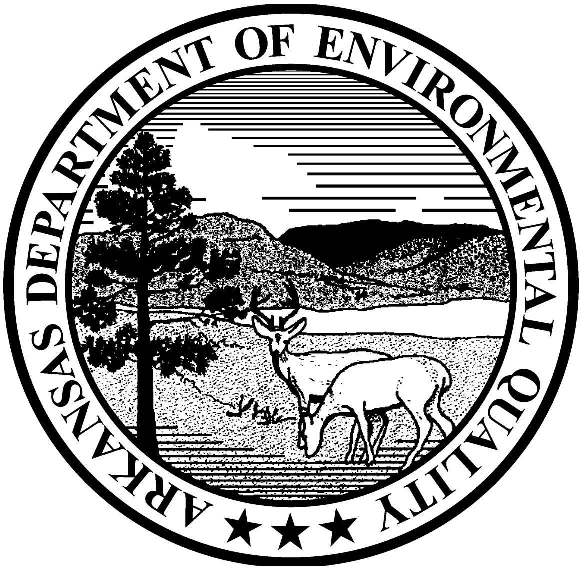
    a. The request does not violate a federal requirement;
    b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
    c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

    [Reg.18.314(C), Reg.19.416(C), Reg.26.1013(C), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

Appendix A

ADEQ’s Continuous Emission Monitoring System Conditions

Arkansas Department of Environmental Quality



CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised September 2013

PREAMBLE

These conditions are intended to outline the requirements for facilities required to operate Continuous Emission Monitoring Systems/Continuous Opacity Monitoring Systems (CEMS/COMS). Generally there are three types of sources required to operate CEMS/COMS:

1. CEMS/COMS required by 40 CFR Part 60 or 63,
2. CEMS required by 40 CFR Part 75,
3. CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75.

These CEMS/COMS conditions are not intended to supercede Part 60, 63 or 75 requirements.

- Only CEMS/COMS in the third category (those required by ADEQ permit for reasons other than Part 60, 63, or 75) shall comply with SECTION II, MONITORING REQUIREMENTS and SECTION IV, QUALITY ASSURANCE/QUALITY CONTROL.

- All CEMS/COMS shall comply with Section III, NOTIFICATION AND RECORDKEEPING.

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

Continuous Opacity Monitoring System (COMS) - The total equipment required for the determination of opacity as to include sampling, analysis and recording of emission data.

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

Back-up CEMS (Secondary CEMS) - A CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEMS is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Excess Emissions - Any period in which the emissions exceed the permit limits.

Monitor Downtime - Any period during which the CEMS/COMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Out-of-Control Period - Begins with the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of two times the allowable limit, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of four times the allowable limit and the time corresponding to the completion of the sampling for the Relative Accuracy Test Audit (RATA), Relative Accuracy Audit (RAA), or Cylinder Gas Audit (CGA) which exceeds the limits outlined in Section IV. Out-of-Control Period ends with the time corresponding to the completion of the CD check following corrective action with the results being within the allowable CD limit or the completion of the sampling of the subsequent successful RATA, RAA, or CGA.

Primary CEMS - The main reporting CEMS with the ability to sample, analyze, and record stack pollutant to determine gas concentration and/or emission rate.

Relative Accuracy (RA) - The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests of the applicable emission limit.

Span Value – The upper limit of a gas concentration measurement range.

SECTION II

MONITORING REQUIREMENTS

** Only CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75 shall comply with this section.

A. For new sources, the installation date for the CEMS/COMS shall be no later than thirty (30) days from the date of start-up of the source.

B. For existing sources, the installation date for the CEMS/COMS shall be no later than sixty (60) days from the issuance of the permit unless the permit requires a specific date.

C. Within sixty (60) days of installation of a CEMS/COMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PST's for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the ADEQ CEM Coordinator prior to testing.

D. Each CEMS/COMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval, the excess zero and span drifts measured must be quantified and recorded.

E. All CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calendar quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.

F. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.

H. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

I. When the pollutant from a single affected facility is released through more than one point, a CEMS/COMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the ADEQ

CEM Coordinator. When more than one CEM/COM is used to monitor emissions from one affected facility the owner or operator shall report the results as required from each CEMS/COMS.

SECTION III

NOTIFICATION AND RECORD KEEPING

** All CEMS/COMS shall comply with this section.

A. When requested to do so by an owner or operator, the ADEQ CEM Coordinator will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.

B. Each facility which operates a CEMS/COMS shall notify the ADEQ CEM Coordinator of the date for which the demonstration of the CEMS/COMS performance will commence (i.e. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 business days prior to testing. Performance test results shall be submitted to the Department within thirty days after completion of testing.

C. Each facility which operates a CEMS/COMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.

D. Each facility required to install a CEMS/COMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter.

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.

F. Each facility which operates a CEMS/COMS must maintain on site a file of CEMS/COMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.

G. Quarterly reports shall be used by the Department to determine compliance with the permit.

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

** Only CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75 shall comply with this section.

A. For each CEMS/COMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS/COMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS/COMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS/COMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CEMS/COMS
    a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS/COMS
    a. Out-of-control period determination
    b. Steps of corrective action
3. Preventive maintenance of CEMS/COMS
    a. CEMS/COMS information
        1) Manufacture
        2) Model number
        3) Serial number
    b. Scheduled activities (check list)
    c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS/COMS

D. A Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA should be conducted in accordance with the applicable test procedure in 40 CFR Part 60 Appendix A and calculated in accordance with the applicable performance specification in 40 CFR Part 60 Appendix B. CGA's and RAA's should be conducted and the data calculated in accordance with the procedures outlined on 40 CFR Part 60 Appendix F.

If alternative testing procedures or methods of calculation are to be used in the RATA, RAA or CGA audits prior authorization must be obtained from the ADEQ CEM Coordinator.

E. Criteria for excessive audit inaccuracy.

RATA

All Pollutants except Carbon Monoxide	> 20% Relative Accuracy
Carbon Monoxide	> 10% Relative Accuracy
All Pollutants except Carbon Monoxide	> 10% of the Applicable Standard
Carbon Monoxide	> 5% of the Applicable Standard
Diluent (O_2 & CO_2)	> 1.0 % O2 or CO2
Flow	> 20% Relative Accuracy

CGA

Pollutant	> 15% of average audit value or 5 ppm difference
Diluent (O_2 & CO_2)	> 15% of average audit value or 5 ppm difference

RAA

Pollutant	> 15% of the three run average or > 7.5 % of the applicable standard
Diluent (O_2 & CO_2)	> 15% of the three run average or > 7.5 % of the applicable standard

F. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. If the CEMS exceeds the audit inaccuracies listed above, the CEMS is out-of-control. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart. The end of the out-of-control period is the time corresponding to the completion of the successful daily zero or span drift or completion of the successful CGA, RAA or RATA.

G. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEMS is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEMS shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minimum the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

Appendix B

Regulation 19, Chapter 8, Designated Facilities

CHAPTER 8: 111(D) DESIGNATED FACILITIES

Reg. 19.801 Purpose

The purpose of this chapter is to establish regulations for designated pollutants emitted from designated facilities in accordance with Section 111(d) of the Clean Air Act.

Reg. 19.802 Permit Emissions Limitations

No person shall cause or permit emissions from equipment located at facilities described in this chapter to be exceeded. Future permit conditions may place more stringent emissions limitations on the equipment which shall supersede the limitations of this section.

Reg. 19.803 Sulfuric Acid Plants (H_2SO_4 Mist)

(A) El Dorado Chemical Company (Arkansas Facility Identification Number [AFIN] 7000040) of El Dorado shall not exceed the following emission limitation after November 1, 1980:

(1) Sulfuric Acid Plant - 0.5 lb sulfuric acid (H_2SO_4) mist/ton 100% acid.

(2) [RESERVED]

(B) Compliance testing shall be performed using EPA Method #8 (40 CFR Part 60 Appendix A as of May 25, 1979) at intervals specified in the applicable permit.

Reg. 19.804 Kraft Pulp Mills (TRS)

(A) Affected Facilities

Equipment located at the following kraft pulp mills are affected by the provisions of this subsection. The total reduced sulfur (TRS) emissions limitations are contained in Table 19.8.1.

(1) International Paper Company (AFIN 3500016) of Pine Bluff.

(2) Green Bay Packaging, Arkansas Kraft Division (AFIN 1500001) of Morrilton.

(3) Delta National Kraft (AFIN 3500017) of Pine Bluff.

(4) Georgia-Pacific Corporation (AFIN 0200013) of Crossett.

(5) Georgia-Pacific Corporation (AFIN 4100002) of Ashdown.

(6) Potlatch Corporation (AFIN 2100036) of McGehee.

(B) Compliance Testing Requirements

All designated equipment in Table 19.8.1 shall have annual compliance testing of TRS emissions performed using EPA Method 16. Data reduction shall be performed as set forth in 40 CFR 60.8 as of January 28, 1983. Annual compliance testing will not be required for equipment with a continuous TRS emissions monitor.

(C) Continuous Monitoring Requirements

Any equipment located at the above designated facilities shall conduct TRS continuous monitoring in accordance with the requirements of 40 CFR 60.284 (date of installation not withstanding). The continuous monitoring systems shall be operated according to the provisions of 40 CFR 60.284 by April 1, 1993, except that continuous emissions monitors for affected lime kilns shall be installed and certified by January 1, 1994.

Table 19.8.1 Kraft Pulp Mill TRS Emission Limits

AFIN	Facility	Equipment	TRS Concentration (parts per million [ppm])
5200013	IP Camden	recovery furnace	40 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 gram (g)/kilogram (kg)

3500016	IP Pine Bluff	recovery furnace	40 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 g/kg
1500001	Green Bay Packaging, Arkansas Kraft Division	recovery furnace	40 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 g/kg
3500017	Gaylord Container, Corp.	recovery furnace	100 ppm
		lime kiln	40 ppm
		smelt dissolving tank	0.0168 g/kg
0200013	GP Crossett	recovery furnace	5 ppm
		lime kiln	8 ppm
		smelt dissolving tank	0.0168 g/kg
4100002	GP Ashdown	recovery furnace	5 ppm
		lime kiln	8 ppm
		smelt dissolving tank	0.0168 g/kg
2100036	Potlatch McGehee	recovery furnace	5 ppm
		lime kiln	20 ppm
		smelt dissolving tank	0.0168 g/kg

Recovery Furnaces – measured as hydrogen sulfide (H_2S) on a dry basis and on a 12 hour average, corrected to 8% by volume oxygen.

Lime Kilns – measured as H_2S on a dry basis and on a 12 hour average, corrected to 10% volume oxygen.

Smelt Dissolving Tanks – measured as grams H_2S/kg black liquor solids on a 12 hour average.

Digesters and Evaporators – efficient incineration of non-condensible gases (at least 1200°F for at least 0.5 second).

Appendix C

40 CFR Part 60, 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*

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 (m3) 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 m3 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 m3 but less than 151 m3 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 m3 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 m3 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 m3 but less than 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

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

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

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

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

§60.111b Definitions.

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

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

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

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

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

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

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

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

(2) As obtained from standard reference texts; or

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

(4) Any other method approved by the Administrator.

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

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

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

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

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

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

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

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

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

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

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

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 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 m3 but less than 151 m3 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 m3 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 cm2 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 cm2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

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

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

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

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

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

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

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

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

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

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

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

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

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

§60.114b Alternative means of emission limitation.

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

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

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

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

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

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

§60.115b Reporting and recordkeeping requirements.

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

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

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

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

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

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

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

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

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

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

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

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

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

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

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

(1) A copy of the operating plan.

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

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

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

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

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

§60.116b Monitoring of operations.

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

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

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m3 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 m3 but less than 151 m3 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 m3 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 m3 but less than 151 m3 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]

Appendix D

40 CFR Part 63, Subpart S—*National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart S—National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

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SOURCE: 63 FR 18617, Apr. 15, 1998, unless otherwise noted.

§63.440 Applicability.

(a) The provisions of this subpart apply to the owner or operator of processes that produce pulp, paper, or paperboard; that are located at a plant site that is a major source as defined in §63.2 of subpart A of this part; and that use the following processes and materials:

(1) Kraft, soda, sulfite, or semi-chemical pulping processes using wood; or

(2) Mechanical pulping processes using wood; or

(3) Any process using secondary or non-wood fibers.

(b) The affected source to which the existing sourceprovisions of this subpart apply is as follows:

(1) For the processes specified in paragraph (a)(1) of this section, the affected source is the total of all HAP emission points in the pulping and bleaching systems; or

(2) For the processes specified in paragraphs (a)(2) or (a)(3) of this section, the affected source is the total of all HAP emission points in the bleaching system.

(c) The new source provisions of this subpart apply to the total of all HAP emission points at new or existing sources as follows:

(1) Each affected source defined in paragraph (b)(1) of this section that commences construction or reconstruction after December 17, 1993;

(2) Each pulping system or bleaching system for the processes specified in paragraph (a)(1) of this section that commences construction or reconstruction after December 17, 1993;

(3) Each additional pulping or bleaching line at the processes specified in paragraph (a)(1) of this section, that commences construction after December 17, 1993;

(4) Each affected source defined in paragraph (b)(2) of this section that commences construction or reconstruction after March 8, 1996; or

(5) Each additional bleaching line at the processes specified in paragraphs (a)(2) or (a)(3) of this section, that commences construction after March 8, 1996.

(d) Each existing source shall achieve compliance no later than April 16, 2001, except as provided in paragraphs (d)(1) through (d)(3) of this section.

(1) Each kraft pulping system shall achieve compliance with the pulping system provisions of §63.443 for the equipment listed in §63.443(a)(1)(ii) through (a)(1)(v) as expeditiously as practicable, but in no event later than April 17, 2006 and the owners and operators shall establish dates, update dates, and report the dates for the milestones specified in §63.455(b).

(2) Each dissolving-grade bleaching system at either kraft or sulfite pulping mills shall achieve compliance with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than 3 years after the promulgation of the revised effluent limitation guidelines and standards under 40 CFR 430.14 through 430.17 and 40 CFR 430.44 through 430.47.

(3) Each bleaching system complying with the Voluntary Advanced Technology Incentives Program for Effluent Limitation Guidelines in 40 CFR 430.24, shall comply with the requirements specified in either paragraph (d)(3)(i) or (d)(3)(ii) of this section for the effluent limitation guidelines and standards in 40 CFR 430.24.

(i) Comply with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than April 16, 2001.

(ii) Comply with paragraphs (d)(3)(ii)(A), (d)(3)(ii)(B), and (d)(3)(ii)(C) of this section.

(A) The owner or operator of a bleaching system shall comply with the bleach plant provisions of §63.445 of this subpart as expeditiously as practicable, but in no event later than April 15, 2004.

(B) The owner or operator of a bleaching system shall comply with the requirements specified in either paragraph (d)(3)(ii)(B)(*1*) or (d)(3)(ii)(B)(*2*) of this section.

(*1*) Not increase the application rate of chlorine or hypochlorite in kilograms (kg) of bleaching agent per megagram of ODP, in the bleaching system above the average daily rates used over the three months prior to June 15, 1998 until the requirements of paragraph (d)(3)(ii)(A) of this section are met and record application rates as specified in §63.454(c).

(*2*) Comply with enforceable effluent limitations guidelines for 2,3,7,8-tetrachloro-dibenzo-p-dioxin and adsorbable organic halides at least as stringent as the baseline BAT levels set out in 40 CFR 430.24(a)(1) as expeditiously as possible, but in no event later than April 16, 2001.

(C) Owners and operators shall establish dates, update dates, and report the dates for the milestones specified in §63.455(b).

(e) Each new source, specified as the total of all HAP emission points for the sources specified in paragraph (c) of this section, shall achieve compliance upon start-up or June 15, 1998, whichever is later, as provided in §63.6(b) of subpart A of this part.

(f) Each owner or operator of an affected source with affected process equipment shared by more than one type of pulping process, shall comply with the applicable requirement in this subpart that achieves the maximum degree of reduction in HAP emissions.

(g) Each owner or operator of an affected source specified in paragraphs (a) through (c) of this section must comply with the requirements of subpart A—General Provisions of this part, as indicated in table 1 to this subpart.

[63 FR 18617, Apr. 15, 1998, as amended at 63 FR 71389, Dec. 28, 1998]

§63.441 Definitions.

All terms used in this subpart shall have the meaning given them in the CAA, in subpart A of this part, and in this section as follows:

Acid condensate storage tank means any storage tank containing cooking acid following the sulfur dioxide gas fortification process.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semi-chemical pulping process.

Bleaching means brightening of pulp by the addition of oxidizing chemicals or reducing chemicals.

Bleaching line means a group of bleaching stages arranged in series such that bleaching of the pulp progresses as the pulp moves from one stage to the next.

Bleaching stage means all process equipment associated with a discrete step of chemical application and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other equipment serving the same function as those previously listed.

Bleaching system means all process equipment after high-density pulp storage prior to the first application of oxidizing chemicals or reducing chemicals following the pulping system, up to and including the final bleaching stage.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam. A boiler is not considered a thermal oxidizer.

Chip steamer means a vessel used for the purpose of preheating or pretreating wood chips prior to the digester, using flash steam from the digester or live steam.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, including but not limited to, a thermal oxidizer, lime kiln, recovery furnace, process heater, or boiler, used for the thermal oxidation of organic hazardous air pollutant vapors.

Decker system means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

Digester system means each continuous digester or each batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associated flash tank(s), blow tank(s), chip steamer(s) not using fresh steam, blow heat recovery accumulator(s), relief gas condenser(s), prehydrolysis unit(s) preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow, or flash steam processes.

Emission point means any part of a stationary source that emits hazardous air pollutants regulated under this subpart, including emissions from individual process vents, stacks, open pieces of process equipment, equipment leaks, wastewater and condensate collection and treatment system units, and those emissions that could reasonably be conveyed through a stack, chimney, or duct where such emissions first reach the environment.

Evaporator system means all equipment associated with increasing the solids content and/or concentrating spent cooking liquor from the pulp washing system including pre-evaporators, multi-effect evaporators, concentrators, and vacuum systems, as well as associated condensers, hotwells, and condensate streams, and any other equipment serving the same function as those previously listed.

Flow indicator means any device that indicates gas or liquid flow in an enclosed system.

HAP means a hazardous air pollutant as defined in §63.2 of subpart A of this part.

High volume, low concentration or HVLC collection system means the gas collection and transport system used to convey gases from the HVLC system to a control device.

High volume, low concentration or HVLC system means the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, weak liquor storage tanks, and any other equipment serving the same function as those previously listed.

Knotter system means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotter system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.

Kraft pulping means a chemical pulping process that uses a mixture of sodium hydroxide and sodium sulfide as the cooking liquor.

Lime kiln means an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

Low volume, high concentration or LVHC collection system means the gas collection and transport system used to convey gases from the LVHC system to a control device.

Low volume, high concentration or LVHC system means the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.

Mechanical pulping means a pulping process that only uses mechanical and thermo-mechanical processes to reduce wood to a fibrous mass. The mechanical pulping processes include, but are not limited to, stone groundwood, pressurized groundwood, refiner mechanical, thermal refiner mechanical, thermo-mechanical, and tandem thermo-mechanical.

Non-wood pulping means the production of pulp from fiber sources other than trees. The non-wood fiber sources include, but are not limited to, bagasse, cereal straw, cotton, flax straw, hemp, jute, kenaf, and leaf fibers.

Oven-dried pulp or ODP means a pulp sample at zero percent moisture content by weight. Pulp samples for applicability or compliance determinations for both the pulping and bleaching systems shall be unbleached pulp. For purposes of complying with mass emission limits in this subpart, megagram of ODP shall be measured to represent the amount of pulp entering and processed by the equipment system under the specified mass limit. For equipment that does not process pulp, megagram of ODP shall be measured to represent the amount of pulp that was processed to produce the gas and liquid streams.

Oxygen delignification system means the equipment that uses oxygen to remove lignin from pulp after high-density stock storage and prior to the bleaching system. The oxygen delignification system equipment includes the blow tank, washers, filtrate tanks, any interstage pulp storage tanks, and any other equipment serving the same function as those previously listed.

Primary fuel means the fuel that provides the principal heat input to the combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

Process wastewater treatment system means a collection of equipment, a process, or specific technique that removes or destroys the HAPs in a process wastewater stream. Examples include, but are not limited to, a steam stripping unit, wastewater thermal oxidizer, or biological treatment unit.

Pulp washing system means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system, or paper machine system (at unbleached mills). The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.

Pulping line means a group of equipment arranged in series such that the wood chips are digested and the resulting pulp progresses through a sequence of steps that may include knotting, refining, washing, thickening, blending, storing, oxygen delignification, and any other equipment serving the same function as those previously listed.

Pulping process condensates means any HAP-containing liquid that results from contact of water with organic compounds in the pulping process. Examples of process condensates include digester system condensates, turpentine recovery system condensates, evaporator system condensates, LVHC system condensates, HVLC system condensates, and any other condensates from equipment serving the same function as those previously listed. Liquid streams that are intended for byproduct recovery are not considered process condensate streams.

Pulping system means all process equipment, beginning with the digester system, and up to and including the last piece of pulp conditioning equipment prior to the bleaching system, including treatment with ozone, oxygen, or peroxide before the first application of a chemical bleaching agent intended to brighten pulp. The pulping system includes pulping process condensates and can include multiple pulping lines.

Recovery furnace means an enclosed combustion device where concentrated spent liquor is burned to recover sodium and sulfur, produce steam, and dispose of unwanted dissolved wood components in the liquor.

Screen system means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

Secondary fiber pulping means a pulping process that converts a fibrous material, that has previously undergone a manufacturing process, into pulp stock through the addition of water and mechanical energy. The mill then uses that pulp as the raw material in another manufactured product. These mills may also utilize chemical, heat, and mechanical processes to remove ink particles from the fiber stock.

Semi-chemical pulping means a pulping process that combines both chemical and mechanical pulping processes. The semi-chemical pulping process produces intermediate yields ranging from 55 to 90 percent.

Soda pulping means a chemical pulping process that uses sodium hydroxide as the active chemical in the cooking liquor.

Spent liquor means process liquid generated from the separation of cooking liquor from pulp by the pulp washing system containing dissolved organic wood materials and residual cooking compounds.

Steam stripper system means a column (including associated stripper feed tanks, condensers, or heat exchangers) used to remove compounds from wastewater or condensates using steam. The steam stripper system also contains all equipment associated with a methanol rectification process including rectifiers, condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed.

Strong liquor storage tanks means all storage tanks containing liquor that has been concentrated in preparation for combustion or oxidation in the recovery process.

Sulfite pulping means a chemical pulping process that uses a mixture of sulfurous acid and bisulfite ion as the cooking liquor.

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of ±1.0 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 degrees Celsius ((°deg;C), whichever is greater.

Thermal oxidizer means an enclosed device that destroys organic compounds by thermal oxidation.

Turpentine recovery system means all equipment associated with recovering turpentine from digester system gases including condensers, decanters, storage tanks, and any other equipment serving the same function as those previously listed. The turpentine recovery system includes any liquid streams associated with the turpentine recovery process such as turpentine decanter underflow. Liquid streams that are intended for byproduct recovery are not considered turpentine recovery system condensate streams.

Weak liquor storage tank means any storage tank except washer filtrate tanks containing spent liquor recovered from the pulping process and prior to the evaporator system.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 77 FR 55710, Sept. 11, 2012]

§63.442 [Reserved]

§63.443 Standards for the pulping system at kraft, soda, and semi-chemical processes.

(a) The owner or operator of each pulping system using the kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.

(1) At existing affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each LVHC system;

(ii) Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in paragraphs (a)(1)(ii)(A) or (a)(1)(ii)(B) of this section or the combined rate specified in paragraph (a)(1)(ii)(C) of this section.

(A) Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton).

(B) Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton).

(C) Each knotter and screen system with emissions of 0.15 kilograms or more of total HAP per megagram of ODP (0.3 pounds per ton).

(iii) Each pulp washing system;

(iv) Each decker system that:

(A) Uses any process water other than fresh water or paper machine white water; or

(B) Uses any process water with a total HAP concentration greater than 400 parts per million by weight; and

(v) Each oxygen delignification system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraphs (a)(1)(i), (a)(1)(iii), and (a)(1)(v) of this section and the following equipment systems shall be controlled:

(i) Each knotter system;

(ii) Each screen system;

(iii) Each decker system; and

(iv) Each weak liquor storage tank.

(b) The owner or operator of each pulping system using a semi-chemical or soda process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (c) and (d) of this section.

(1) At each existing affected source, the total HAP emissions from each LVHC system shall be controlled.

(2) At each new affected source, the total HAP emissions from each LVHC system and each pulp washing system shall be controlled.

(c) Equipment systems listed in paragraphs (a) and (b) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (d) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450.

(d) The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:

(1) Reduce total HAP emissions by 98 percent or more by weight; or

(2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or

(3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871 °C (1600 °F) and a minimum residence time of 0.75 seconds; or

(4) Reduce total HAP emissions using one of the following:

(i) A boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone; or

(ii) A boiler or recovery furnace with a heat input capacity greater than or equal to 44 megawatts (150 million British thermal units per hour) by introducing the HAP emission stream with the combustion air.

(e) Periods of excess emissions reported under §63.455 shall not be a violation of §63.443(c) and (d) provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:

(1) One percent for control devices used to reduce the total HAP emissions from the LVHC system; and

(2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and

(3) Four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 66 FR 80762, Dec. 22, 2000; 77 FR 55710, Sept. 11, 2012]

§63.444 Standards for the pulping system at sulfite processes.

(a) The owner or operator of each sulfite process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems as specified in paragraphs (b) and (c) of this section.

(1) At existing sulfite affected sources, the total HAP emissions from the following equipment systems shall be controlled:

(i) Each digester system vent;

(ii) Each evaporator system vent; and

(iii) Each pulp washing system.

(2) At new affected sources, the total HAP emissions from the equipment systems listed in paragraph (a)(1) of this section and the following equipment shall be controlled:

(i) Each weak liquor storage tank;

(ii) Each strong liquor storage tank; and

(iii) Each acid condensate storage tank.

(b) Equipment listed in paragraph (a) of this section shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. Emissions from equipment listed in paragraph (a) of this section that is not necessary to be reduced to meet paragraph (c) of this section is not required to be routed to a control device.

(c) The total HAP emissions from both the equipment systems listed in paragraph (a) of this section and the vents, wastewater, and condensate streams from the control device used to reduce HAP emissions, shall be controlled as follows.

(1) Each calcium-based or sodium-based sulfite pulping process shall:

(i) Emit no more than 0.44 kilograms of total HAP or methanol per megagram (0.89 pounds per ton) of ODP; or

(ii) Remove 92 percent or more by weight of the total HAP or methanol.

(2) Each magnesium-based or ammonium-based sulfite pulping process shall:

(i) Emit no more than 1.1 kilograms of total HAP or methanol per megagram (2.2 pounds per ton) of ODP; or

(ii) Remove 87 percent or more by weight of the total HAP or methanol.

§63.445 Standards for the bleaching system.

(a) Each bleaching system that does not use any chlorine or chlorinated compounds for bleaching is exempt from the requirements of this section. Owners or operators of the following bleaching systems shall meet all the provisions of this section:

(1) Bleaching systems that use chlorine;

(2) Bleaching systems bleaching pulp from kraft, sulfite, or soda pulping processes that use any chlorinated compounds; or

(3) Bleaching systems bleaching pulp from mechanical pulping processes using wood or from any process using secondary or non-wood fibers, that use chlorine dioxide.

(b) The equipment at each bleaching stage, of the bleaching systems listed in paragraph (a) of this section, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system and routed to a control device that meets the requirements specified in paragraph (c) of this section. The enclosures and closed-vent system shall meet the requirements specified in §63.450. If process modifications are used to achieve compliance with the emission limits specified in paragraphs (c)(2) or (c)(3), enclosures and closed-vent systems are not required, unless appropriate.

(c) The control device used to reduce chlorinated HAP emissions (not including chloroform) from the equipment specified in paragraph (b) of this section shall:

(1) Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight;

(2) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or

(3) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP.

(d) The owner or operator of each bleaching system subject to paragraph (a)(2) of this section shall comply with paragraph (d)(1) or (d)(2) of this section to reduce chloroform air emissions to the atmosphere, except the owner or operator of each bleaching system complying with extended compliance under §63.440(d)(3)(ii) shall comply with paragraph (d)(1) of this section.

(1) Comply with the following applicable effluent limitation guidelines and standards specified in 40 CFR part 430:

(i) Dissolving-grade kraft bleaching systems and lines, 40 CFR 430.14 through 430.17;

(ii) Paper-grade kraft and soda bleaching systems and lines, 40 CFR 430.24(a)(1) and (e), and 40 CFR 430.26 (a) and (c);

(iii) Dissolving-grade sulfite bleaching systems and lines, 40 CFR 430.44 through 430.47; or

(iv) Paper-grade sulfite bleaching systems and lines, 40 CFR 430.54(a) and (c), and 430.56(a) and (c).

(2) Use no hypochlorite or chlorine for bleaching in the bleaching system or line.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999]

§63.446 Standards for kraft pulping process condensates.

(a) The requirements of this section apply to owners or operators of kraft processes subject to the requirements of this subpart.

(b) The pulping process condensates from the following equipment systems shall be treated to meet the requirements specified in paragraphs (c), (d), and (e) of this section:

(1) Each digester system;

(2) Each turpentine recovery system;

(3) Each evaporator system condensate from:

(i) The vapors from each stage where weak liquor is introduced (feed stages); and

(ii) Each evaporator vacuum system for each stage where weak liquor is introduced (feed stages).

(4) Each HVLC collection system; and

(5) Each LVHC collection system.

(c) One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment systems listed in paragraph (b) of this section shall be subject to the requirements of paragraphs (d) and (e) of this section:

(1) All pulping process condensates from the equipment systems specified in paragraphs (b)(1) through (b)(5) of this section.

(2) The combined pulping process condensates from the equipment systems specified in paragraphs (b)(4) and (b)(5) of this section, plus pulping process condensate stream(s) that in total contain at least 65 percent of the total HAP mass from the pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(3) of this section.

(3) The pulping process condensates from equipment systems listed in paragraphs (b)(1) through (b)(5) of this section that in total contain a total HAP mass of 3.6 kilograms or more of total HAP per megagram (7.2 pounds per ton) of ODP for mills that do not perform bleaching or 5.5 kilograms or more of total HAP per megagram (11.1 pounds per ton) of ODP for mills that perform bleaching.

(d) The pulping process condensates from the equipment systems listed in paragraph (b) of this section shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Each closed collection system shall meet the individual drain system requirements specified in §§63.960, 63.961, and 63.962 of subpart RR of this part, except for closed vent systems and control devices shall be designed and operated in accordance with §§63.443(d) and 63.450, instead of in accordance with §63.693 as specified in §63.962 (a)(3)(ii), (b)(3)(ii)(A), and (b)(5)(iii); and

(2) If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:

(i) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements in §63.450 and routed to a control device that meets the requirements in §63.443(d); and

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(e) Each pulping process condensate from the equipment systems listed in paragraph (b) of this section shall be treated according to one of the following options:

(1) Recycle the pulping process condensate to an equipment system specified in §63.443(a) meeting the requirements specified in §63.443(c) and (d); or

(2) Discharge the pulping process condensate below the liquid surface of a biological treatment system and treat the pulping process condensates to meet the requirements specified in paragraph (e)(3), (4), or (5) of this section, and total HAP shall be measured as specified in §63.457(g); or

(3) Treat the pulping process condensates to reduce or destroy the total HAPs by at least 92 percent or more by weight; or

(4) At mills that do not perform bleaching, treat the pulping process condensates to remove 3.3 kilograms or more of total HAP per megagram (6.6 pounds per ton) of ODP, or achieve a total HAP concentration of 210 parts per million or less by weight at the outlet of the control device; or

(5) At mills that perform bleaching, treat the pulping process condensates to remove 5.1 kilograms or more of total HAP per megagram (10.2 pounds per ton) of ODP, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device.

(f) Each HAP removed from a pulping process condensate stream during treatment and handling under paragraphs (d) or (e) of this section, except for those treated according to paragraph (e)(2) of this section, shall be controlled as specified in §63.443(c) and (d).

(g) For each control device (e.g., steam stripper system or other equipment serving the same function) used to treat pulping process condensates to comply with the requirements specified in paragraphs (e)(3) through (5) of this section, periods of excess emissions reported under §63.455 shall not be a violation of paragraphs (d), (e)(3) through (5), and (f) of this section provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent. The 10 percent excess emissions allowance does not apply to treatment of pulping process condensates according to paragraph (e)(2) of this section (e.g., the biological wastewater treatment system used to treat multiple (primarily non-condensate) wastewater streams to comply with the Clean Water Act).

(h) Each owner or operator of a new or existing affected source subject to the requirements of this section shall evaluate all new or modified pulping process condensates or changes in the annual bleached or non-bleached ODP used to comply with paragraph (i) of this section, to determine if they meet the applicable requirements of this section.

(i) For the purposes of meeting the requirements in paragraph (c)(2) or (3) or paragraph (e)(4) or (5) of this section at mills producing both bleached and unbleached pulp products, owners and operators may meet a prorated mass standard that is calculated by prorating the applicable mass standards (kilograms of total HAP per megagram of ODP) for bleached and unbleached mills specified in paragraph (c)(2) or (3) or paragraph (e)(4) or (5) of this section by the ratio of annual megagrams of bleached and unbleached ODP.

[63 FR 18617, Apr. 15, 1998; 63 FR 42239, Aug. 7, 1998, as amended at 63 FR 49459, Sept. 16, 1998; 64 FR 17563, Apr. 12, 1999; 65 FR 80762, Dec. 22, 2000; 77 FR 55711, Sept. 11, 2012]

§63.447 Clean condensate alternative.

As an alternative to the requirements specified in §63.443(a)(1)(ii) through (a)(1)(v) for the control of HAP emissions from pulping systems using the kraft process, an owner or operator must demonstrate to the satisfaction of the Administrator, by meeting all the requirements below, that the total HAP emissions reductions achieved by this clean condensate alternative technology are equal to or greater than the total HAP emission reductions that would have been achieved by compliance with §63.443(a)(1)(ii) through (a)(1)(v).

(a) For the purposes of this section only the following additional definitions apply.

(1) *Clean condensate alternative affected source* means the total of all HAP emission points in the pulping, bleaching, causticizing, and papermaking systems (exclusive of HAP emissions attributable to additives to paper machines and HAP emission points in the LVHC system).

(2) *Causticizing system* means all equipment associated with converting sodium carbonate into active sodium hydroxide. The equipment includes smelt dissolving tanks, lime mud washers and storage tanks, white and mud liquor clarifiers and storage tanks, slakers, slaker grit washers, lime kilns, green liquor clarifiers and storage tanks, and dreg washers ending with the white liquor storage tanks prior to the digester system, and any other equipment serving the same function as those previously listed.

(3) *Papermaking system* means all equipment used to convert pulp into paper, paperboard, or market pulp, including the stock storage and preparation systems, the paper or paperboard machines, and the paper machine white water system, broke recovery systems, and the systems involved in calendering, drying, on-machine coating, slitting, winding, and cutting.

(b) Each owner or operator shall install and operate a clean condensate alternative technology with a continuous monitoring system to reduce total HAP emissions by treating and reducing HAP concentrations in the pulping process water used within the clean condensate alternative affected source.

(c) Each owner or operator shall calculate HAP emissions on a kilogram per megagram of ODP basis and measure HAP emissions according to the appropriate procedures contained in §63.457.

(d) Each owner or operator shall determine the baseline HAP emissions for each equipment system and the total of all equipment systems in the clean condensate alternative affected source based on the following:

(1) Process and air pollution control equipment installed and operating on December 17, 1993, and

(2) Compliance with the following requirements that affect the level of HAP emissions from the clean condensate alternative affected source:

(i) The pulping process condensates requirements in §63.446;

(ii) The applicable effluent limitation guidelines and standards in 40 CFR part 430, subparts A, B, D, and E; and

(iii) All other applicable requirements of local, State, or Federal agencies or statutes.

(e) Each owner or operator shall determine the following HAP emission reductions from the baseline HAP emissions determined in paragraph (d) of this section for each equipment system and the total of all equipment systems in the clean condensate alternative affected source:

(1) The HAP emission reduction occurring by complying with the requirements of §63.443(a)(1)(ii) through (a)(1)(v); and

(2) The HAP emissions reduction occurring by complying with the clean condensate alternative technology.

(f) For the purposes of all requirements in this section, each owner or operator may use as an alternative, individual equipment systems (instead of total of all equipment systems) within the clean condensate alternative affected source to determine emissions and reductions to demonstrate equal or greater than the reductions that would have been achieved by compliance with §63.443(a)(1)(ii) through (a)(1)(v).

(g) The initial and updates to the control strategy report specified in §63.455(b) shall include to the extent possible the following information:

(1) A detailed description of:

(i) The equipment systems and emission points that comprise the clean condensate alternative affected source;

(ii) The air pollution control technologies that would be used to meet the requirements of §63.443(a)(1)(ii) through (a)(1)(v); and

(iii) The clean condensate alternative technology to be used.

(2) Estimates and basis for the estimates of total HAP emissions and emission reductions to fulfill the requirements of paragraphs (d), (e), and (f) of this section.

(h) Each owner or operator shall report to the Administrator by the applicable compliance date specified in §63.440(d) or (e) the rationale, calculations, test procedures, and data documentation used to demonstrate compliance with all the requirements of this section.

[63 FR 18617, Apr. 15, 1998; 63 FR 42239, Aug. 7, 1998, as amended at 64 FR 17563, Apr. 12, 1999]

§§63.448-63.449 [Reserved]

§63.450 Standards for enclosures and closed-vent systems.

(a) Each enclosure and closed-vent system specified in §§63.443(c), 63.444(b), and 63.445(b) for capturing and transporting vent streams that contain HAP shall meet the requirements specified in paragraphs (b) through (d) of this section.

(b) Each enclosure shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in §63.457(e). Each enclosure or hood opening closed during the initial performance test specified in §63.457(a) shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

(c) Each component of the closed-vent system used to comply with §§63.443(c), 63.444(b), and 63.445(b) that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in §63.457(d).

(d) Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations in §§63.443, 63.444, or 63.445 shall comply with either of the following requirements:

(1) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that is capable of taking periodic readings as frequently as specified in §63.454(e). The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or

(2) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 68 FR 37348, June 23, 2003]

§§63.451-63.452 [Reserved]

§63.453 Monitoring requirements.

(a) Each owner or operator subject to the standards specified in §§63.443(c) and (d), 63.444(b) and (c), 63.445(b) and (c), 63.446(c), (d), and (e), 63.447(b) or §63.450(d), shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS, as defined in §63.2 of this part) as specified in paragraphs (b) through (m) of this section, except as allowed in paragraph (m) of this section. The CMS shall include a continuous recorder.

(b) A CMS shall be operated to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs for each thermal oxidizer used to comply with the requirements of §63.443(d)(1) through (d)(3). Owners and operators complying with the HAP concentration requirements in §63.443(d)(2) may install a CMS to monitor the thermal oxidizer outlet total HAP or methanol concentration, as an alternative to monitoring thermal oxidizer operating temperature.

(c) A CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of §63.445(c) or the sulfite pulping system requirements of §63.444(c).

(1) The pH or the oxidation/reduction potential of the gas scrubber effluent;

(2) The gas scrubber vent gas inlet flow rate; and

(3) The gas scrubber liquid influent flow rate.

(d) As an option to the requirements specified in paragraph (c) of this section, a CMS shall be operated to measure the chlorine outlet concentration of each gas scrubber used to comply with the bleaching system outlet concentration requirement specified in §63.445(c)(2).

(e) The owner or operator of a bleaching system complying with 40 CFR 430.24, shall monitor the chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system during the extended compliance period specified in §63.440(d)(3).

(f) A CMS shall be operated to measure the gas scrubber parameters specified in paragraphs (c)(1) through (c)(3) of this section or those site specific parameters determined according to the procedures specified in paragraph (n) of this section to comply with the sulfite pulping system requirements specified in §63.444(c).

(g) A CMS shall be operated to measure the following parameters for each steam stripper used to comply with the treatment requirements in §63.446(e) (3), (4), or (5):

(1) The process wastewater feed rate;

(2) The steam feed rate; and

(3) The process wastewater column feed temperature.

(h) As an option to the requirements specified in paragraph (g) of this section, a CMS shall be operated to measure the methanol outlet concentration to comply with the steam stripper outlet concentration requirement specified in §63.446 (e)(4) or (e)(5).

(i) A CMS shall be operated to measure the appropriate parameters determined according to the procedures specified in paragraph (n) of this section to comply with the condensate applicability requirements specified in §63.446(c).

(j) Each owner or operator using an open biological treatment system to comply with §63.446(e)(2) shall perform the daily monitoring procedures specified in either paragraph (j)(1) or (2) of this section and shall conduct a performance test each quarter using the procedures specified in paragraph (j)(3) of this section.

(1) Comply with the monitoring and sampling requirements specified in paragraphs (j)(1)(i) and (ii) of this section.

(i) On a daily basis, monitor the following parameters for each open biological treatment unit:

(A) Composite daily sample of outlet soluble BOD_5 concentration to monitor for maximum daily and maximum monthly average;

(B) Mixed liquor volatile suspended solids;

(C) Horsepower of aerator unit(s);

(D) Inlet liquid flow; and

(E) Liquid temperature.

(ii) If the Inlet and Outlet Concentration Measurement Procedure (Procedure 3) in appendix C of this part is used to determine the fraction of HAP compounds degraded in the biological treatment system as specified in §63.457(l), conduct the sampling and archival requirements specified in paragraphs (j)(1)(ii)(A) and (B) of this section.

(A) Obtain daily inlet and outlet liquid grab samples from each biological treatment unit to have HAP data available to perform quarterly performance tests specified in paragraph (j)(3) of this section and the compliance tests specified in paragraph (p) of this section.

(B) Store the samples as specified in §63.457(n) until after the results of the soluble BOD_5 test required in paragraph (j)(1)(i)(A) of this section are obtained. The storage requirement is needed since the soluble BOD_5 test requires 5 days or more to obtain results. If the results of the soluble BOD_5 test are outside of the range established during the initial performance test, then the archive sample shall be used to perform the mass removal or percent reduction determinations.

(2) As an alternative to the monitoring requirements of paragraph (j)(1) of this section, conduct daily monitoring of the site-specific parameters established according to the procedures specified in paragraph (n) of this section.

(3) Conduct a performance test as specified in §63.457(l) within 45 days after the beginning of each quarter and meet the applicable emission limit in §63.446(e)(2).

(i) The performance test conducted in the first quarter (annually) shall be performed for total HAP as specified in §63.457(g) and meet the percent reduction or mass removal emission limit specified in §63.446(e)(2).

(ii) The remaining quarterly performance tests shall be performed as specified in paragraph (j)(3)(i) of this section except owners or operators may use the applicable methanol procedure in §63.457(l)(1) or (2) and the value of r determined during the first quarter test instead of measuring the additional HAP to determine a new value of r.

(k) Each enclosure and closed-vent system used to comply with §63.450(a) shall comply with the requirements specified in paragraphs (k)(1) through (k)(6) of this section.

(1) For each enclosure opening, a visual inspection of the closure mechanism specified in §63.450(b) shall be performed at least once every 30 days to ensure the opening is maintained in the closed position and sealed.

(2) Each closed-vent system required by §63.450(a) shall be visually inspected every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

(3) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in §63.450(c) measured initially and annually by the procedures in §63.457(d).

(4) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in §63.457(e).

(5) The valve or closure mechanism specified in §63.450(d)(2) shall be inspected at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

(6) If an inspection required by paragraphs (k)(1) through (k)(5) of this section identifies visible defects in ductwork, piping, enclosures or connections to covers required by §63.450, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable.

(i) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

(ii) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the owner or operator determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(l) Each pulping process condensate closed collection system used to comply with §63.446(d) shall comply with the requirements specified in paragraphs (l)(1) through (l)(3) of this section.

(1) Each pulping process condensate closed collection system shall be visually inspected every 30 days and shall comply with the inspection and monitoring requirements specified in §63.964 of subpart RR of this part, except:

(i) Owners or operators shall comply with the recordkeeping requirements of §63.454 instead of the requirements specified in §63.964(a)(1)(vi) and (b)(3) of subpart RR of this part.

(ii) Owners or operators shall comply with the inspection and monitoring requirements for closed-vent systems and control devices specified in paragraphs (a) and (k) of this section instead of the requirements specified in §63.964(a)(2) of subpart RR of this part.

(2) Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in §63.446(d)(2)(i) measured initially and annually by the procedures specified in §63.457(d).

(3) If an inspection required by this section identifies visible defects in the closed collection system, or if an instrument reading of 500 parts per million or greater above background is measured, then corrective actions specified in §63.964(b) of subpart RR of this part shall be taken.

(m) Each owner or operator using a control device, technique or an alternative parameter other than those specified in paragraphs (b) through (l) of this section shall install a CMS and establish appropriate operating parameters to be monitored that demonstrate, to the Administrator's satisfaction, continuous compliance with the applicable control requirements.

(n) To establish or reestablish the value for each operating parameter required to be monitored under paragraphs (b) through (j), (l), and (m) of this section or to establish appropriate parameters for paragraphs (f), (i), (j)(2), and (m) of this section, each owner or operator shall use the following procedures:

(1) During the initial performance test required in §63.457(a) or any subsequent performance test, continuously record the operating parameter;

(2) Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer's recommendations;

(3) The owner or operator shall provide for the Administrator's approval the rationale for selecting the monitoring parameters necessary to comply with paragraphs (f), (i), and (m) of this section; and

(4) Provide for the Administrator's approval the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard.

(o) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum or maximum (as appropriate) operating parameter value or procedure required to be monitored under paragraphs (a) through (n) of this section and established under this subpart. Except as provided in paragraph (p) of this section, §63.443(e), or §63.446(g), operation of the control device below minimum operating parameter values or above maximum operating parameter values established under this subpart or failure to perform procedures required by this subpart shall constitute a violation of the applicable emission standard of this subpart and be reported as a period of excess emissions.

(p) The procedures of this paragraph apply to each owner or operator of an open biological treatment system complying with paragraph (j) of this section whenever a monitoring parameter excursion occurs, and the owner or operator chooses to conduct a performance test to demonstrate compliance with the applicable emission limit. A monitoring parameter excursion occurs whenever the monitoring parameters specified in paragraphs (j)(1)(i)(A) through (C) of this section or any of the monitoring parameters specified in paragraph (j)(2) of this section are below minimum operating parameter values or above maximum operating parameter values established in paragraph (n) of this section.

(1) As soon as practical after the beginning of the monitoring parameter excursion, the following requirements shall be met:

(i) Before the steps in paragraph (p)(1)(ii) or (iii) of this section are performed, all sampling and measurements necessary to meet the requirements in paragraph (p)(2) of this section shall be conducted.

(ii) Steps shall be taken to repair or adjust the operation of the process to end the parameter excursion period.

(iii) Steps shall be taken to minimize total HAP emissions to the atmosphere during the parameter excursion period.

(2) A parameter excursion is not a violation of the applicable emission standard if the results of the performance test conducted using the procedures in this paragraph demonstrate compliance with the applicable emission limit in §63.446(e)(2).

(i) Conduct a performance test as specified in §63.457 using the monitoring data specified in paragraph (j)(1) or (2) of this section that coincides with the time of the parameter excursion. No maintenance or changes shall be made to the open biological treatment system after the beginning of a parameter excursion that would influence the results of the performance test.

(ii) If the results of the performance test specified in paragraph (p)(2)(i) of this section demonstrate compliance with the applicable emission limit in §63.446(e)(2), then the parameter excursion is not a violation of the applicable emission limit.

(iii) If the results of the performance test specified in paragraph (p)(2)(i) of this section do not demonstrate compliance with the applicable emission limit in §63.446(e)(2) because the total HAP mass entering the open biological treatment system is below the level needed to demonstrate compliance with the applicable emission limit in §63.446(e)(2), then the owner or operator shall perform the following comparisons:

(A) If the value of f_{bio} (MeOH) determined during the performance test specified in paragraph (p)(2)(i) of this section is within the range of values established during the initial and subsequent performance tests approved by the Administrator, then the parameter excursion is not a violation of the applicable standard.

(B) If the value of f_{bio} (MeOH) determined during the performance test specified in paragraph (p)(2)(i) of this section is not within the range of values established during the initial and subsequent performance tests approved by the Administrator, then the parameter excursion is a violation of the applicable standard.

(iv) The results of the performance test specified in paragraph (p)(2)(i) of this section shall be recorded as specified in §63.454(f).

(3) If an owner or operator determines that performing the required procedures under paragraph (p)(2) of this section for a nonthoroughly mixed open biological system would expose a worker to dangerous, hazardous, or otherwise unsafe conditions, all of the following procedures shall be performed:

(i) Calculate the mass removal or percent reduction value using the procedures specified in §63.457(l) except the value for f_{bio} (MeOH) shall be determined using the procedures in appendix E to this part.

(ii) Repeat the procedures in paragraph (p)(3)(i) of this section for every day until the unsafe conditions have passed.

(iii) A parameter excursion is a violation of the standard if the percent reduction or mass removal determined in paragraph (p)(3)(i) of this section is less than the percent reduction or mass removal standards specified in §63.446(e)(2), as appropriate, unless the value of f_{bio} (MeOH) determined using the procedures in appendix E of this section, as specified in paragraph (p)(3)(i), is within the range of f_{bio} (MeOH) values established during the initial and subsequent performance tests previously approved by the Administrator.

(iv) The determination that there is a condition that exposes a worker to dangerous, hazardous, or otherwise unsafe conditions shall be documented according to requirements in §63.454(e) and reporting in §63.455(f).

(v) The requirements of paragraphs (p)(1) and (2) of this section shall be performed and met as soon as practical but no later than 24 hours after the conditions have passed that exposed a worker to dangerous, hazardous, or otherwise unsafe conditions.

(q) At all times, the owner or operator 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. 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.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17563, Apr. 12, 1999; 65 FR 80762, Dec. 22, 2000; 77 FR 55711, Sept. 11, 2012]

§63.454 Recordkeeping requirements.

(a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of §63.10, as shown in Table 1 of this subpart, and the requirements specified in paragraphs (b) through (g) of this section for the monitoring parameters specified in §63.453.

(b) For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall prepare and maintain a site-specific inspection plan including a drawing or schematic of the components of applicable affected equipment and shall record the following information for each inspection:

(1) Date of inspection;

(2) The equipment type and identification;

(3) Results of negative pressure tests for enclosures;

(4) Results of leak detection tests;

(5) The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);

(6) The date the defect or leak was detected and the date of each attempt to repair the defect or leak;

(7) Repair methods applied in each attempt to repair the defect or leak;

(8) The reason for the delay if the defect or leak is not repaired within 15 days after discovery;

(9) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;

(10) The date of successful repair of the defect or leak;

(11) The position and duration of opening of bypass line valves and the condition of any valve seals; and

(12) The duration of the use of bypass valves on computer controlled valves.

(c) The owner or operator of a bleaching system complying with §63.440(d)(3)(ii)(B) shall record the daily average chlorine and hypochlorite application rates, in kg of bleaching agent per megagram of ODP, of the bleaching system until the requirements specified in §63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall record the CMS parameters specified in §63.453 and meet the requirements specified in paragraph (a) of this section for any new affected process equipment or pulping process condensate stream that becomes subject to the standards in this subpart due to a process change or modification.

(e) The owner or operator shall set the flow indicator on each bypass line specified in §63.450(d)(1) to provide a record of the presence of gas stream flow in the bypass line at least once every 15 minutes.

(f) The owner or operator of an open biological treatment system complying with §63.453(p) shall prepare a written record specifying the results of the performance test specified in §63.453(p)(2).

(g) *Recordkeeping of malfunctions.* The owner or operator must maintain the following records of malfunctions:

(1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.453(q), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[63 FR 18617, Apr. 15, 1998, as amended at 65 FR 80763, Dec. 22, 2000; 68 FR 37348, June 23, 2003; 77 FR 55711, Sept. 11, 2012]

§63.455 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of subpart A of this part as specified in table 1 and all the following requirements in this section. The initial notification report specified under §63.9(b)(2) of subpart A of this part shall be submitted by April 15, 1999.

(b) Each owner or operator of a kraft pulping system specified in §63.440(d)(1) or a bleaching system specified in §63.440(d)(3)(ii) shall submit, with the initial notification report specified under §63.9(b)(2) of subpart A of this part and paragraph (a) of this section and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in paragraphs (b)(1) through (b)(3) of this section in addition to the information required in §63.9(b)(2) of subpart A of this part.

(1) A description of the emission controls or process modifications selected for compliance with the control requirements in this standard.

(2) A compliance schedule, including the dates by which each step toward compliance will be reached for each emission point or sets of emission points. At a minimum, the list of dates shall include:

(i) The date by which the major study(s) for determining the compliance strategy will be completed;

(ii) The date by which contracts for emission controls or process modifications will be awarded, or the date by which orders will be issued for the purchase of major components to accomplish emission controls or process changes;

(iii) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;

(iv) The date by which on-site construction, installation of emissions control equipment, or a process change is to be completed;

(v) The date by which final compliance is to be achieved;

(vi) For compliance with paragraph §63.440(d)(3)(ii), the tentative dates by which compliance with effluent limitation guidelines and standards intermediate pollutant load effluent reductions and as available, all the dates for the best available technology's milestones reported in the National Pollutant Discharge Elimination System authorized under section 402 of the Clean Water Act and for the best professional milestones in the Voluntary Advanced Technology Incentives Program under 40 CFR 430.24 (b)(2); and

(vii) The date by which the final compliance tests will be performed.

(3) Until compliance is achieved, revisions or updates shall be made to the control strategy report required by paragraph (b) of this section indicating the progress made towards completing the installation of the emission controls or process modifications during the 2-year period.

(c) The owner or operator of each bleaching system complying with §63.440(d)(3)(ii)(B) shall certify in the report specified under §63.10(e)(3) of subpart A of this part that the daily application rates of chlorine and hypochlorite for that bleaching system have not increased as specified in §63.440(d)(3)(ii)(B) until the requirements of §63.440(d)(3)(ii)(A) are met.

(d) The owner or operator shall meet the requirements specified in paragraph (a) of this section upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of this subpart due to a process change or modification.

(e) If the owner or operator uses the results of the performance test required in §63.453(p)(2) to revise the approved values or ranges of the monitoring parameters specified in §63.453(j)(1) or (2), the owner or operator shall submit an initial notification of the subsequent performance test to the Administrator as soon as practicable, but no later than 15 days, before the performance test required in §63.453(p)(2) is scheduled to be conducted. The owner or operator shall notify the Administrator as soon as practicable, but no later than 24 hours, before the performance test is scheduled to be conducted to confirm the exact date and time of the performance test.

(f) To comply with the open biological treatment system monitoring provisions of §63.453(p)(3), the owner or operator shall notify the Administrator as soon as practicable of the onset of the dangerous, hazardous, or otherwise unsafe conditions that did not allow a compliance determination to be conducted using the sampling and test procedures in §63.457(l). The notification shall occur no later than 24 hours after the onset of the dangerous, hazardous, or otherwise unsafe conditions and shall include the specific reason(s) that the sampling and test procedures in §63.457(l) could not be performed.

(g) *Malfunction reporting requirements.* If a malfunction occurred during the reporting period, the report must include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.453(q), including actions taken to correct a malfunction.

(h) The owner or operator must submit performance test reports as specified in paragraphs (h)(1) through (4) of this section.

(1) The owner or operator of an affected source shall report the results of the performance test before the close of business on the 60th day following the completion of the performance test, unless approved otherwise in writing by the Administrator. A performance test is “completed” when field sample collection is terminated. Unless otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions and raw data. A complete test report must include the purpose of the test; a brief process description; a complete unit description, including a description of feed streams and control devices; sampling site description; pollutants measured; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions, including operating parameters for which limits are being set, during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; chain-of-custody documentation; explanation of laboratory data qualifiers; example calculations of all applicable stack gas parameters, emission rates, percent reduction rates, and analytical results, as applicable; and any other information required by the test method and the Administrator.

(2) Within 60 days after the date of completing each performance test (defined in §63.2) as required by this subpart, the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by this subpart to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, the owner or operator must also submit these reports, including the CBI, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

(3) Within 60 days after the date of completing each CEMS performance evaluation test as defined in §63.2, the owner or operator must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with paragraph (2) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(4) All reports required by this subpart not subject to the requirements in paragraphs (h)(2) and (3) of this section must be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraphs (h)(2) and (3) of this section in paper format

[63 FR 18617, Apr. 15, 1998, as amended at 65 FR 80763, Dec. 22, 2000; 77 FR 55711, Sept. 11, 2012]

§63.456 Affirmative defense for violation of emission standards during malfunction.

In response to an action to enforce the standards set forth in §§63.443(c) and (d), 63.444(b) and (c), 63.445(b) and (c), 63.446(c), (d), and (e), 63.447(b) or §63.450(d), the owner or operator may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if the owner or operator fails to meet the burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) To establish the affirmative defense in any action to enforce such a standard, the owner or operator must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, and

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(3) The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(b) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[77 FR 55712, Sept. 11, 2012]

§63.457 Test methods and procedures.

(a) *Performance tests.* Initial and repeat performance tests are required for the emissions sources specified in paragraphs (a)(1) and (2) of this section, except for emission sources controlled by a combustion device that is designed and operated as specified in §63.443(d)(3) or (4).

(1) Conduct an initial performance test for all emission sources subject to the limitations in §§63.443, 63.444, 63.445, 63.446, and 63.447.

(2) Conduct repeat performance tests at five-year intervals for all emission sources subject to the limitations in §§63.443, 63.444, and 63.445. The first of the 5-year repeat tests must be conducted by September 7, 2015, and thereafter within 60 months from the date of the previous performance test. Five-year repeat testing is not required for the following:

(i) Knotter or screen systems with HAP emission rates below the criteria specified in §63.443(a)(1)(ii).

(ii) Decker systems using fresh water or paper machine white water, or decker systems using process water with a total HAP concentration less than 400 parts per million by weight as specified in §63.443(a)(1)(iv).

(b) *Vent sampling port locations and gas stream properties.* For purposes of selecting vent sampling port locations and determining vent gas stream properties, required in §§63.443, 63.444, 63.445, and 63.447, each owner or operator shall comply with the applicable procedures in paragraphs (b)(1) through (b)(6) of this section.

(1) Method 1 or 1A of part 60, appendix A-1, as appropriate, shall be used for selection of the sampling site as follows:

(i) To sample for vent gas concentrations and volumetric flow rates, the sampling site shall be located prior to dilution of the vent gas stream and prior to release to the atmosphere;

(ii) For determining compliance with percent reduction requirements, sampling sites shall be located prior to the inlet of the control device and at the outlet of the control device; measurements shall be performed simultaneously at the two sampling sites; and

(iii) For determining compliance with concentration limits or mass emission rate limits, the sampling site shall be located at the outlet of the control device.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter (4.0 inches) in diameter.

(3) The vent gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of part 60, appendix A-1, as appropriate.

(4) The moisture content of the vent gas shall be measured using Method 4 of part 60, appendix A-3.

(5) To determine vent gas concentrations, the owner or operator shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting pollutant concentrations using the following procedures.

(i) Method 308 in Appendix A of this part; Method 320 in Appendix A of this part; Method 18 in appendix A-6 of part 60; ASTM D6420-99 (Reapproved 2004) (incorporated by reference in §63.14(b)(28) of subpart A of this part); or ASTM D6348-03 (incorporated by reference in §63.14(b)(54) of subpart A of this part) shall be used to determine the methanol concentration. If ASTM D6348-03 is used, the conditions specified in paragraphs (b)(5)(i)(A) though (b)(5)(i)(B) must be met.

(A) The test plan preparation and implementation in the Annexes to ASTM D6348-03, sections A1 through A8 are required.

(B) In ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5 of ASTM D6348-03). In order for the test data to be acceptable for a compound, %R must be between 70 and 130 percent. If the %R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte following adjustment of the sampling or analytical procedure before the retest. The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound using the following equation: Reported Result = Measured Concentration in the Stack × 100)/%R.

(ii) Except for the modifications specified in paragraphs (b)(5)(ii)(A) through (b)(5)(ii)(K) of this section, Method 26A of part 60, appendix A-8 shall be used to determine chlorine concentration in the vent stream.

(A) *Probe/sampling line.* A separate probe is not required. The sampling line shall be an appropriate length of 0.64 cm (0.25 in) OD Teflon® tubing. The sample inlet end of the sampling line shall be inserted into the stack in such a way as to not entrain liquid condensation from the vent gases. The other end shall be connected to the impingers. The length of the tubing may vary from one sampling site to another, but shall be as short as possible in each situation. If sampling is conducted in sunlight, opaque tubing shall be used. Alternatively, if transparent tubing is used, it shall be covered with opaque tape.

(B) *Impinger train.* Three 30 milliliter (ml) capacity midget impingers shall be connected in series to the sampling line. The impingers shall have regular tapered stems. Silica gel shall be placed in the third impinger as a desiccant. All impinger train connectors shall be glass and/or Teflon®.

(C) *Critical orifice.* The critical orifice shall have a flow rate of 200 to 250 ml/min and shall be followed by a vacuum pump capable of providing a vacuum of 640 millimeters of mercury (mm Hg). A 45 millimeter diameter in-line Teflon 0.8 micrometer filter shall follow the impingers to protect the critical orifice and vacuum pump.

(D) The following are necessary for the analysis apparatus:

(*1*) Wash bottle filled with deionized water;

(*2*) 25 or 50 ml graduated burette and stand;

(*3*) Magnetic stirring apparatus and stir bar;

(*4*) Calibrated pH Meter;

(*5*) 150-250 ml beaker or flask; and

(*6*) A 5 ml pipette.

(E) The procedures listed in paragraphs (b)(5)(ii)(E)(*1*) through (b)(5)(ii)(E)(*7*) of this section shall be used to prepare the reagents.

(*1*) To prepare the 1 molarity (M) potassium dihydrogen phosphate solution, dissolve 13.61 grams (g) of potassium dihydrogen phosphate in water and dilute to 100 ml.

(*2*) To prepare the 1 M sodium hydroxide solution (NaOH), dissolve 4.0 g of sodium hydroxide in water and dilute to 100 ml.

(*3*) To prepare the buffered 2 percent potassium iodide solution, dissolve 20 g of potassium iodide in 900 ml water. Add 50 ml of the 1 M potassium dihydrogen phosphate solution and 30 ml of the 1 M sodium hydroxide solution. While stirring solution, measure the pH of solution electrometrically and add the 1 M sodium hydroxide solution to bring pH to between 6.95 and 7.05.

(*4*) To prepare the 0.1 normality (N) sodium thiosulfate solution, dissolve 25 g of sodium thiosulfate, pentahydrate, in 800 ml of freshly boiled and cooled distilled water in a 1-liter volumetric flask. Dilute to volume. To prepare the 0.01 N sodium thiosulfate solution, add 10.0 ml standardized 0.1 N sodium thiosulfate solution to a 100 ml volumetric flask, and dilute to volume with water.

(*5*) To standardize the 0.1 N sodium thiosulfate solution, dissolve 3.249 g of anhydrous potassium bi-iodate, primary standard quality, or 3.567 g potassium iodate dried at 103 =/−2 degrees Centigrade for 1 hour, in distilled water and dilute to 1000 ml to yield a 0.1000 N solution. Store in a glass-stoppered bottle. To 80 ml distilled water, add, with constant stirring, 1 ml concentrated sulfuric acid, 10.00 ml 0.1000 N anhydrous potassium bi-iodate, and 1 g potassium iodide. Titrate immediately with 0.1 n sodium thiosulfate titrant until the yellow color of the liberated iodine is almost discharged. Add 1 ml starch indicator solution and continue titrating until the blue color disappears. The normality of the sodium thiosulfate solution is inversely proportional to the ml of sodium thiosulfate solution consumed:

$$\begin{array}{c}\text{Normality of}\\ \textit{Sodium Thiosulfate}\end{array} = \frac{1}{\text{ml Sodium Thiosulfate Consumed}}$$

(*6*) To prepare the starch indicator solution, add a small amount of cold water to 5 g starch and grind in a mortar to obtain a thin paste. Pour paste into 1 L of boiling distilled water, stir, and let settle overnight. Use clear supernate for starch indicator solution.

(*7*) To prepare the 10 percent sulfuric acid solution, add 10 ml of concentrated sulfuric acid to 80 ml water in a 100 ml volumetric flask. Dilute to volume.

(F) The procedures specified in paragraphs (b)(5)(ii)(F)(*1*) through (b)(5)(ii)(F)(*5*) of this section shall be used to perform the sampling.

(*1*) *Preparation of collection train.* Measure 20 ml buffered potassium iodide solution into each of the first two impingers and connect probe, impingers, filter, critical orifice, and pump. The sampling line and the impingers shall be shielded from sunlight.

(*2*) *Leak and flow check procedure.* Plug sampling line inlet tip and turn on pump. If a flow of bubbles is visible in either of the liquid impingers, tighten fittings and adjust connections and impingers. A leakage rate not in excess of 2 percent of the sampling rate is acceptable. Carefully remove the plug from the end of the probe. Check the flow rate at the probe inlet with a bubble tube flow meter. The flow should be comparable or slightly less than the flow rate of the critical orifice with the impingers off-line. Record the flow and turn off the pump.

(*3*) *Sample collection.* Insert the sampling line into the stack and secure it with the tip slightly lower than the port height. Start the pump, recording the time. End the sampling after 60 minutes, or after yellow color is observed in the second in-line impinger. Record time and remove the tubing from the vent. Recheck flow rate at sampling line inlet and turn off pump. If the flow rate has changed significantly, redo sampling with fresh capture solution. A slight variation (less than 5 percent) in flow may be averaged. With the inlet end of the line elevated above the impingers, add about 5 ml water into the inlet tip to rinse the line into the first impinger.

(*4*) *Sample analysis.* Fill the burette with 0.01 N sodium thiosulfate solution to the zero mark. Combine the contents of the impingers in the beaker or flask. Stir the solution and titrate with thiosulfate until the solution is colorless. Record the volume of the first endpoint (TN, ml). Add 5 ml of the 10 percent sulfuric acid solution, and continue the titration until the contents of the flask are again colorless. Record the total volume of titrant required to go through the first and to the second endpoint (TA, ml). If the volume of neutral titer is less than 0.5 ml, repeat the testing for a longer period of time. It is important that sufficient lighting be present to clearly see the endpoints, which are determined when the solution turns from pale yellow to colorless. A lighted stirring plate and a white background are useful for this purpose.

(*5*) *Interferences.* Known interfering agents of this method are sulfur dioxide and hydrogen peroxide. Sulfur dioxide, which is used to reduce oxidant residuals in some bleaching systems, reduces formed iodine to iodide in the capture solution. It is therefore a negative interference for chlorine, and in some cases could result in erroneous negative chlorine concentrations. Any agent capable of reducing iodine to iodide could interfere in this manner. A chromium trioxide impregnated filter will capture sulfur dioxide and pass chlorine and chlorine dioxide. Hydrogen peroxide, which is commonly used as a bleaching agent in modern bleaching systems, reacts with iodide to form iodine and thus can cause a positive interference in the chlorine measurement. Due to the chemistry involved, the precision of the chlorine analysis will decrease as the ratio of chlorine dioxide to chlorine increases. Slightly negative calculated concentrations of chlorine may occur when sampling a vent gas with high concentrations of chlorine dioxide and very low concentrations of chlorine.

(G) The following calculation shall be performed to determine the corrected sampling flow rate:

$$S_C = S_U \left(\frac{BP - PW}{760} \right) \left(\frac{293}{273 + t} \right)$$

Where:

S_C = Corrected (dry standard) sampling flow rate, liters per minute;

S_U = Uncorrected sampling flow rate, L/min;

BP=Barometric pressure at time of sampling;

PW=Saturated partial pressure of water vapor, mm Hg at temperature; and

t=Ambient temperature, °C.

(H) The following calculation shall be performed to determine the moles of chlorine in the sample:

$$Cl_2 Moles = 1/8000 \left(5\,T_N - T_A \right) \times N_{Thio}$$

Where:

T_N = Volume neutral titer, ml;

T_A = Volume acid titer (total), ml; and

N_{Thio} = Normality of sodium thiosulfate titrant.

(I) The following calculation shall be performed to determine the concentration of chlorine in the sample:

$$Cl_2\,ppmv = \frac{3005(5\,T_N - T_A) \times N_{Thio}}{S_C \times t_S}$$

Where:

S_C = Corrected (dry standard) sampling flow rate, liters per minute;

t_S = Time sampled, minutes;

T_N = Volume neutral titer, ml;

T_A = Volume acid titer (total), ml; and

N_{Thio} = Normality of sodium thiosulfate titrant.

(J) The following calculation shall be performed to determine the moles of chlorine dioxide in the sample:

$$C1O_2\,Moles = 1/4000(T_A - T_N) \times N_{Thio}$$

Where:

T_A = Volume acid titer (total), ml;

T_N = Volume neutral titer, ml; and

N_{Thio} = Normality of sodium thiosulfate titrant.

(K) The following calculation shall be performed to determine the concentration of chlorine dioxide in the sample:

$$C1O_2\;ppmv = \frac{6010(T_A - T_N) \times N_{Thio}}{S_C \times t_S}$$

Where:

S_C = Corrected (dry standard) sampling flow rate, liters per minute;

t_S = Time sampled, minutes;

T_A = Volume acid titer (total), ml;

T_N = Volume neutral titer, ml; and

N_{Thio} = Normality of sodium thiosulfate titrant.

(iii) Any other method that measures the total HAP or methanol concentration that has been demonstrated to the Administrator's satisfaction.

(6) The minimum sampling time for each of the three test runs shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the test run.

(c) *Liquid sampling locations and properties.* For purposes of selecting liquid sampling locations and for determining properties of liquid streams such as wastewaters, process waters, and condensates required in §§63.444, 63.446, and 63.447, the owner or operator shall comply with the following procedures:

(1) Samples shall be collected using the sampling procedures of the test method listed in paragraph (c)(3) of this section selected to determine liquid stream HAP concentrations;

(i) Where feasible, samples shall be taken from an enclosed pipe prior to the liquid stream being exposed to the atmosphere; and

(ii) When sampling from an enclosed pipe is not feasible, samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of HAP compounds prior to sampling.

(2) The volumetric flow rate of the entering and exiting liquid streams shall be determined using the inlet and outlet flow meters or other methods demonstrated to the Administrator's satisfaction. The volumetric flow rate measurements to determine actual mass removal shall be taken at the same time as the concentration measurements.

(3) The owner or operator shall conduct a minimum of three test runs that are representative of normal conditions and average the resulting pollutant concentrations. The minimum sampling time for each test run shall be 1 hour and the grab or composite samples shall be taken at approximately equally spaced intervals over the 1-hour test run period. The owner or operator shall use one of the following procedures to determine total HAP or methanol concentration:

(i) Method 305 in Appendix A of this part, adjusted using the following equation:

$$\overline{C} = \sum_{i=1}^{n} C_i / fm_i$$

Where:

$\overline{C}$ = Pollutant concentration for the liquid stream, parts per million by weight.

C_i = Measured concentration of pollutant i in the liquid stream sample determined using Method 305, parts per million by weight.

fm_i = Pollutant-specific constant that adjusts concentration measured by Method 305 to actual liquid concentration; the fm for methanol is 0.85. Additional pollutant fm values can be found in table 34, subpart G of this part.

n=Number of individual pollutants, i, summed to calculate total HAP.

(ii) For determining methanol concentrations, NCASI Method DI/MEOH-94.03. This test method is incorporated by reference in §63.14(f)(1) of subpart A of this part.

(iii) Any other method that measures total HAP concentration that has been demonstrated to the Administrator's satisfaction.

(4) To determine soluble BOD_5 in the effluent stream from an open biological treatment unit used to comply with §§63.446(e)(2) and 63.453(j), the owner or operator shall use Method 405.1 of part 136 of this chapter with the following modifications:

(i) Filter the sample through the filter paper, into an Erlenmeyer flask by applying a vacuum to the flask sidearm. Minimize the time for which vacuum is applied to prevent stripping of volatile organics from the sample. Replace filter paper as often as needed in order to maintain filter times of less than approximately 30 seconds per filter paper. No rinsing of sample container or filter bowl into the Erlenmeyer flask is allowed.

(ii) Perform Method 405.1 on the filtrate obtained in paragraph (c)(4) of this section. Dilution water shall be seeded with 1 milliliter of final effluent per liter of dilution water. Dilution ratios may require adjustment to reflect the lower oxygen demand of the filtered sample in comparison to the total BOD_5. Three BOD bottles and different dilutions shall be used for each sample.

(5) If the test method used to determine HAP concentration indicates that a specific HAP is not detectable, the value determined as the minimum measurement level (MML) of the selected test method for the specific HAP shall be used in the compliance demonstration calculations. To determine the MML for a specific HAP using one of the test methods specified in paragraph (c)(3) of this section, one of the procedures specified in paragraphs (c)(5)(i) and (ii) of this section shall be performed. The MML for a particular HAP must be determined only if the HAP is not detected in the normal working range of the method.

(i) To determine the MML for a specific HAP, the following procedures shall be performed each time the method is set up. Set up is defined as the first time the analytical apparatus is placed in operation, after any shut down of 6 months or more, or any time a major component of the analytical apparatus is replaced.

(A) Select a concentration value for the specific HAP in question to represent the MML. The value of the MML selected shall not be below the calibration standard of the selected test method.

(B) Measure the concentration of the specific HAP in a minimum of three replicate samples using the selected test method. All replicate samples shall be run through the entire analytical procedure. The samples must contain the specific HAP at the selected MML concentration and should be representative of the liquid streams to be analyzed in the compliance demonstration. Spiking of the liquid samples with a known concentration of the target HAP may be necessary to ensure that the HAP concentration in the three replicate samples is at the selected MML. The concentration of the HAP in the spiked sample must be within 50 percent of the proposed MML for the demonstration to be valid. As an alternative to spiking, a field sample above the MML may be diluted to produce a HAP concentration at the MML. To be a valid demonstration, the diluted sample must have a HAP concentration within 20 percent of the proposed MML, and the field sample must not be diluted by more than a factor of five.

(C) Calculate the relative standard deviation (RSD) and the upper confidence limit at the 95 percent confidence level using the measured HAP concentrations determined in paragraph (c)(5)(i)(B) of this section. If the upper confidence limit of the RSD is less than 30 percent, then the selected MML is acceptable. If the upper confidence limit of the RSD is greater than or equal to 30 percent, then the selected MML is too low, and the procedures specified in paragraphs (c)(5)(i)(A) through (C) of this section must be repeated.

(ii) Provide for the Administrator's approval the selected value of the MML for a specific HAP and the rationale for selecting the MML including all data and calculations used to determine the MML. The approved MML must be used in all applicable compliance demonstration calculations.

(6) When using the MML determined using the procedures in paragraph (c)(5)(ii) of this section or when using the MML determined using the procedures in paragraph (c)(5)(i), except during set up, the analytical laboratory conducting the analysis must perform and meet the following quality assurance procedures each time a set of samples is analyzed to determine compliance.

(i) Using the selected test method, analyze in triplicate the concentration of the specific HAP in a representative sample. The sample must contain the specific HAP at a concentration that is within a factor of two of the MML. If there are no samples in the set being analyzed that contain the specific HAP at an appropriate concentration, then a sample below the MML may be spiked to produce the appropriate concentration, or a sample at a higher level may be diluted. After spiking, the sample must contain the specific HAP within 50 percent of the MML. If dilution is used instead, the diluted sample must contain the specific HAP within 20 percent of the MML and must not be diluted by more than a factor of five.

(ii) Calculate the RSD using the measured HAP concentrations determined in paragraph (c)(6)(i) of this section. If the RSD is less than 20 percent, then the laboratory is performing acceptably.

(d) *Detectable leak procedures.* To measure detectable leaks for closed-vent systems as specified in §63.450 or for pulping process wastewater collection systems as specified in §63.446(d)(2)(i), the owner or operator shall comply with the following:

(1) Method 21, of part 60, appendix A-7; and

(2) The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:

(i) Zero air (less than 10 parts per million by volume of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

(e) *Negative pressure procedures.* To demonstrate negative pressure at process equipment enclosure openings as specified in §63.450(b), the owner or operator shall use one of the following procedures:

(1) An anemometer to demonstrate flow into the enclosure opening;

(2) Measure the static pressure across the opening;

(3) Smoke tubes to demonstrate flow into the enclosure opening; or

(4) Any other industrial ventilation test method demonstrated to the Administrator's satisfaction.

(f) *HAP concentration measurements.* For purposes of complying with the requirements in §§63.443, 63.444, and 63.447, the owner or operator shall measure the total HAP concentration as one of the following:

(1) As the sum of all individual HAPs; or

(2) As methanol.

(g) *Condensate HAP concentration measurement.* For purposes of complying with the kraft pulping condensate requirements in §63.446, the owner or operator shall measure the total HAP concentration as methanol. For biological treatment systems complying with §63.446(e)(2), the owner or operator shall measure total HAP as acetaldehyde, methanol, methyl ethyl ketone, and propionaldehyde and follow the procedures in §63.457(l)(1) or (2).

(h) *Bleaching HAP concentration measurement.* For purposes of complying with the bleaching system requirements in §63.445, the owner or operator shall measure the total HAP concentration as the sum of all individual chlorinated HAPs or as chlorine.

(i) *Vent gas stream calculations.* To demonstrate compliance with the mass emission rate, mass emission rate per megagram of ODP, and percent reduction requirements for vent gas streams specified in §§63.443, 63.444, 63.445, and 63.447, the owner or operator shall use the following:

(1) The total HAP mass emission rate shall be calculated using the following equation:

$$E = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

Where:

E=Mass emission rate of total HAP from the sampled vent, kilograms per hour.

K_2 = Constant, 2.494×10^{-6} (parts per million by volume)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

C_j = Concentration on a dry basis of pollutant j in parts per million by volume as measured by the test methods specified in paragraph (b) of this section.

M_j = Molecular weight of pollutant j, gram/gram-mole.

Q_s = Vent gas stream flow rate (dry standard cubic meter per minute) at a temperature of 20 °C as indicated in paragraph (b) of this section.

n=Number of individual pollutants, i, summed to calculate total HAP.

(2) The total HAP mass emission rate per megagram of ODP shall be calculated using the following equation:

$$F = \frac{E}{P}$$

Where:

F=Mass emission rate of total HAP from the sampled vent, in kilograms per megagram of ODP.

E=Mass emission rate of total HAP from the sampled vent, in kilograms per hour determined as specified in paragraph (i)(1) of this section.

P=The production rate of pulp during the sampling period, in megagrams of ODP per hour.

(3) The total HAP percent reduction shall be calculated using the following equation:

$$R = \frac{E_i - E_o}{E_i} (100)$$

Where:

R=Efficiency of control device, percent.

Ei=Inlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

E_o = Outlet mass emission rate of total HAP from the sampled vent, in kilograms of pollutant per hour, determined as specified in paragraph (i)(1) of this section.

(j) *Liquid stream calculations.* To demonstrate compliance with the mass flow rate, mass per megagram of ODP, and percent reduction requirements for liquid streams specified in §63.446, the owner or operator shall use the following:

(1) The mass flow rates of total HAP or methanol entering and exiting the treatment process shall be calculated using the following equations:

$$E_b = \frac{K}{n \times 10^6}\left(\sum_{i=1}^{n} V_{bi} C_{bi}\right)$$

$$E_a = \frac{K}{n \times 10^6}\left(\sum_{i=1}^{n} V_{ai} C_{ai}\right)$$

Where:

E_b = Mass flow rate of total HAP or methanol in the liquid stream entering the treatment process, kilograms per hour.

E_a = Mass flow rate of total HAP or methanol in the liquid exiting the treatment process, kilograms per hour.

K=Density of the liquid stream, kilograms per cubic meter.

V_{bi} = Volumetric flow rate of liquid stream entering the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.

V_{ai} = Volumetric flow rate of liquid stream exiting the treatment process during each run i, cubic meters per hour, determined as specified in paragraph (c) of this section.

C_{bi} = Concentration of total HAP or methanol in the stream entering the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.

C_{ai} = Concentration of total HAP or methanol in the stream exiting the treatment process during each run i, parts per million by weight, determined as specified in paragraph (c) of this section.

n=Number of runs.

(2) The mass of total HAP or methanol per megagram ODP shall be calculated using the following equation:

$$F = \frac{E_a}{P}$$

Where:

F=Mass loading of total HAP or methanol in the sample, in kilograms per megagram of ODP.

E_a = Mass flow rate of total HAP or methanol in the wastewater stream in kilograms per hour as determined using the procedures in paragraph (j)(1) of this section.

P=The production rate of pulp during the sampling period in megagrams of ODP per hour.

(3) The percent reduction of total HAP across the applicable treatment process shall be calculated using the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

Where:

R=Control efficiency of the treatment process, percent.

E_b = Mass flow rate of total HAP in the stream entering the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

E_a = Mass flow rate of total HAP in the stream exiting the treatment process, kilograms per hour, as determined in paragraph (j)(1) of this section.

(4) Compounds that meet the requirements specified in paragraphs (j)(4)(i) or (4)(ii) of this section are not required to be included in the mass flow rate, mass per megagram of ODP, or the mass percent reduction determinations.

(i) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(ii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight.

(k) *Oxygen concentration correction procedures.* To demonstrate compliance with the total HAP concentration limit of 20 ppmv in §63.443(d)(2), the concentration measured using the methods specified in paragraph (b)(5) of this section shall be corrected to 10 percent oxygen using the following procedures:

(1) The emission rate correction factor and excess air integrated sampling and analysis procedures of Methods 3A or 3B of part 60, appendix A-2 shall be used to determine the oxygen concentration. The samples shall be taken at the same time that the HAP samples are taken. As an alternative to Method 3B, ASME PTC 19.10-1981 [Part 10] may be used (incorporated by reference, see §63.14(i)(1)).

(2) The concentration corrected to 10 percent oxygen shall be computed using the following equation:

$$C_c = C_m \left(\frac{10.9}{20.9 - \%O_{2d}} \right)$$

Where:

C_c = Concentration of total HAP corrected to 10 percent oxygen, dry basis, parts per million by volume.

C_m = Concentration of total HAP dry basis, parts per million by volume, as specified in paragraph (b) of this section.

$\%0_{2d}$ = Concentration of oxygen, dry basis, percent by volume.

(l) *Biological treatment system percent reduction and mass removal calculations.* To demonstrate compliance with the condensate treatment standards specified in §63.446(e)(2) and the monitoring requirements specified in §63.453(j)(3) using a biological treatment system, the owner or operator shall use one of the procedures specified in paragraphs (1)(1) and (2) of this section. Owners or operators using a nonthoroughly mixed open biological treatment system shall also comply with paragraph (1)(3) of this section.

(1) *Percent reduction methanol procedure.* For the purposes of complying with the condensate treatment requirements specified in §63.446(e)(2) and (3), the methanol percent reduction shall be calculated using the following equations:

$$R = \frac{f_{bio}(\mathrm{MeOH})}{\left(1 + 1.087(r)\right)} * 100$$

$$r = \frac{F_{(nonmethanol)}}{F_{(methanol)}}$$

Where:

R = Percent destruction.

$f_{bio}(\mathrm{MeOH})$ = The fraction of methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the appropriate procedures specified in appendix C of this part.

r = Ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass to methanol mass.

$F_{(nonmethanol)}$ = The sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass flow rates (kg/Mg ODP) entering the biological treatment system determined using the procedures in paragraph (j)(2) of this section.

$F_{(methanol)}$ = The mass flow rate (kg/Mg ODP) of methanol entering the system determined using the procedures in paragraph (j)(2) of this section.

(2) *Mass removal methanol procedure.* For the purposes of complying with the condensate treatment requirements specified in §63.446(e)(2) and (4), or §63.446(e)(2) and (5), the methanol mass removal shall be calculated using the following equation:

$$F = F_b * \left(f_{bio}(MeOH) / \left(1 + 1.087(r)\right)\right)$$

Where:

F = Methanol mass removal (kg/Mg ODP).

F_b = Inlet mass flow rate of methanol (kg/Mg ODP) determined using the procedures in paragraph (j)(2) of this section.

$f_{bio}(\mathrm{MeOH})$ = The fraction of methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the appropriate procedures specified in appendix C of this part.

r = Ratio of the sum of acetaldehyde, methyl ethyl ketone, and propionaldehyde mass to methanol mass determined using the procedures in paragraph (1) of this section.

(3) The owner or operator of a nonthoroughly mixed open biological treatment system using the monitoring requirements specified in §63.453(p)(3) shall follow the procedures specified in section III.B.1 of appendix E of this part to determine the borate constant, Ks, and characterize the open biological treatment system during the initial and any subsequent performance tests.

(m) *Condensate segregation procedures.* The following procedures shall be used to demonstrate compliance with the condensate segregation requirements specified in §63.446(c).

(1) To demonstrate compliance with the percent mass requirements specified in §63.446(c)(2), the procedures specified in paragraphs (m)(1)(i) through (iii) of this section shall be performed.

(i) Determine the total HAP mass of all condensates from each equipment system listed in §63.446 (b)(1) through (b)(3) using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Multiply the total HAP mass determined in paragraph (m)(1)(i) of this section by 0.65 to determine the target HAP mass for the high-HAP fraction condensate stream or streams.

(iii) Compliance with the segregation requirements specified in §63.446(c)(2) is demonstrated if the condensate stream or streams from each equipment system listed in §63.446(b)(1) through (3) being treated as specified in §63.446(e) contain at least as much total HAP mass as the target total HAP mass determined in paragraph (m)(1)(ii) of this section.

(2) To demonstrate compliance with the percent mass requirements specified in §63.446(c)(3), the procedures specified in paragraphs (m)(2)(i) through (ii) of this section shall be performed.

(i) Determine the total HAP mass contained in the high-HAP fraction condensates from each equipment system listed in §63.446(b)(1) through (b)(3) and the total condensates streams from the equipment systems listed in §63.446(b)(4) and (b)(5), using the procedures specified in paragraphs (c) and (j) of this section.

(ii) Compliance with the segregation requirements specified in §63.446(c)(3) is demonstrated if the total HAP mass determined in paragraph (m)(2)(i) of this section is equal to or greater than the appropriate mass requirements specified in §63.446(c)(3).

(n) *Open biological treatment system monitoring sampling storage.* The inlet and outlet grab samples required to be collected in §63.453(j)(1)(ii) shall be stored at 4 °C (40 °F) to minimize the biodegradation of the organic compounds in the samples.

(o) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

[63 FR 18617, Apr. 15, 1998, as amended at 64 FR 17564, Apr. 12, 1999; 65 FR 80763, Dec. 22, 2000; 66 FR 24269, May 14, 2001; 77 FR 55712, Sept. 11, 2012]

§63.458 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart.

Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.440, 63.443 through 63.447 and 63.450. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) Approval of alternatives to using §§63.457(b)(5)(iii), 63.457(c)(3)(ii) through (iii), and 63.257(c)(5)(ii), and any major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of alternatives using §64.453(m) and any major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37348, June 23, 2003]

§63.459 Alternative standards.

(a) *Flint River Mill.* The owner or operator of the pulping system using the kraft process at the manufacturing facility, commonly called Weyerhaeuser Company Flint River Operations, at Old Stagecoach Road, Oglethorpe, Georgia, (hereafter the Site) shall comply with all provisions of this subpart, except as specified in paragraphs (a)(1) through (a)(5) of this section.

(1) The owner or operator of the pulping system is not required to control total HAP emissions from equipment systems specified in paragraphs (a)(1)(i) and (a)(1)(ii) if the owner or operator complies with paragraphs (a)(2) through (a)(5) of this section.

(i) The brownstock diffusion washer vent and first stage brownstock diffusion washer filtrate tank vent in the pulp washing system specified in §63.443(a)(1)(iii).

(ii) The oxygen delignification system specified in §63.443(a)(1)(v).

(2) The owner or operator of the pulping system shall control total HAP emissions from equipment systems listed in paragraphs (a)(2)(i) through (a)(2)(ix) of this section as specified in §63.443(c) and (d) of this subpart no later than April 16, 2002.

(i) The weak liquor storage tank;

(ii) The boilout tank;

(iii) The utility tank;

(iv) The fifty percent solids black liquor storage tank;

(v) The south sixty-seven percent solids black liquor storage tank;

(vi) The north sixty-seven percent solids black liquor storage tank;

(vii) The precipitator make down tanks numbers one, two and three;

(viii) The salt cake mix tank; and

(ix) The NaSH storage tank.

(3) The owner and operator of the pulping system shall operate the Isothermal Cooking system at the site while pulp is being produced in the continuous digester at any time after April 16, 2002.

(i) The owner or operator shall monitor the following parameters to demonstrate that isothermal cooking is in operation:

(A) Continuous digester dilution factor; and

(B) The difference between the continuous digester vapor zone temperature and the continuous digester extraction header temperature.

(ii) The isothermal cooking system shall be in operation when the continuous digester dilution factor and the temperature difference between the continuous digester vapor zone temperature and the continuous digester extraction header temperature are maintained as set forth in Table 2:

Table 2 to Subpart S—Isothermal Cooking System Operational Values

Parameter	Instrument number	Limit	Units
Digester Dilution Factor	K1DILFAC	>0.0	None
Difference in Digester Vapor Zone Temperature and Digester	03TI0311	<10	Degrees F.
Extraction Header Temperature	03TI0329		

(iii) The owner or operator shall certify annually the operational status of the isothermal cooking system.

(4) [Reserved]

(5) *Definitions.* All descriptions and references to equipment and emission unit ID numbers refer to equipment at the Site. All terms used in this paragraph shall have the meaning given them in this part and this paragraph. For the purposes of this paragraph only the following additional definitions apply:

Boilout tank means the tank that provides tank storage capacity for recovery of black liquor spills and evaporator water washes for return to the evaporators (emission unit ID No. U606);

Brownstock diffusion washer means the equipment used to wash pulp from the surge chests to further reduce lignin carryover in the pulp;

Continuous digester means the digester system used to chemically and thermally remove the lignin binding the wood chips to produce individual pulp fibers (emission unit ID No. P300);

Fifty percent solids black liquor storage tank means the tank used to store intermediate black liquor prior to final evaporation in the 1A, 1B, and 1C Concentrators (emission unit ID No. U605);

First stage brownstock diffusion washer means the equipment that receives and stores filtrate from the first stage of washing for return to the pressure diffusion washer;

Isothermal cooking system means the 1995-1996 modernization of brownstock pulping process including conversion of the Kamyr continuous vapor phase digester to an extended delignification unit and changes in the knotting, screening, and oxygen stage systems:

NaSH storage tank means the tank used to store sodium hydrosulfite solution prior to use as make-up to the liquor system

North sixty-seven percent solids black liquor storage tank means one of two tanks used to store black liquor prior to burning in the Recovery Boiler for chemical recovery (emission unit ID No. U501);

Precipitator make down tank numbers one, two and three mean tanks used to mix collected particulate from electrostatic precipitator chamber number one with 67% black liquor for recycle to chemical recovery in the Recovery Boiler (emission unit ID Nos. U504, U505 and U506);

Salt cake mix tank means the tank used to mix collected particulate from economizer hoppers with black liquor for recycle to chemical recovery in the Recovery Boiler (emission unit ID No. U503);

South sixty-seven percent solids black liquor storage tank means one of two tanks used to store black liquor prior to burning in the Recovery Boiler for chemical recovery (emission unit ID No. U502);

Utility tank means the tank used to store fifty percent liquor and, during black liquor tank inspections and repairs, to serve as a backup liquor storage tank (emission unit ID No. U611);

Weak gas system means high volume, low concentration or HVLC system as defined in §63.441; and

Weak liquor storage tank means the tank that provide surge capacity for weak black liquor from digesting prior to feed to multiple effect evaporators (emission unit ID No. U610).

(b) *Tomahawk Wisconsin Mill*—(1) *Applicability.* (i) The provisions of this paragraph (b) apply to the owner or operator of the stand-alone semi-chemical pulp and paper mill located at N9090 County Road E in Tomahawk, Wisconsin, referred to as the Tomahawk Mill.

(ii) The owner or operator is not required to comply with the provisions of this paragraph (b) if the owner and operator chooses to comply with the otherwise applicable sections of this subpart and provides the EPA with notice.

(iii) If the owner or operator chooses to comply with the provisions of this paragraph (b) the owner or operator shall comply with all applicable provisions of this part, including this subpart, except the following:

(A) Section 63.443(b);

(B) Section 63.443(c); and

(C) Section 63.443(d).

(2) *Collection and routing of HAP emissions.* (i) The owner or operator shall collect the total HAP emissions from each LVHC system.

(ii) Each LVHC system shall be enclosed and the HAP emissions shall be vented into a closed-vent system. The enclosures and closed-vent system shall meet requirements specified in paragraph (b)(6) of this section.

(iii) The HAP emissions shall be routed as follows:

(A) The HAP emissions collected in the closed-vent system from the digester system shall be routed through the primary indirect contact condenser, secondary indirect contact condenser, and evaporator indirect contact condenser; and

(B) The HAP emissions collected in the closed-vent system from the evaporator system and foul condensate standpipe shall be routed through the evaporator indirect contact condenser.

(3) *Collection and routing of pulping process condensates.* (i) The owner or operator shall collect the pulping process condensates from the following equipment systems:

(A) Primary indirect contact condenser;

(B) Secondary indirect contact condenser; and

(C) Evaporator indirect contact condenser.

(ii) The collected pulping process condensates shall be conveyed in a closed collection system that is designed and operated to meet the requirements specified in paragraph (b)(7) of this section.

(iii) The collected pulping process condensates shall be routed in the closed collection system to the wastewater treatment plant anaerobic basins for biodegradation.

(iv) The pulping process condensates shall be discharged into the wastewater treatment plant anaerobic basins below the liquid surface of the wastewater treatment plant anaerobic basins.

(4) *HAP destruction efficiency requirements of the wastewater treatment plant.* (i) The owner or operator shall achieve a destruction efficiency of at least one pound of HAPs per ton of ODP by biodegradation in the wastewater treatment plant.

(ii) The following calculation shall be performed to determine the HAP destruction efficiency by biodegradation in the wastewater treatment plant:

$$HAP_d = \frac{\left[\left(RME_{fr} \times RME_c\right) + \left(PPC_{fr} \times PPC_c\right) - \left(ABD_{fr} \times ABD_c\right)\right] \times 8.34}{ODP_r}$$

Where:

HAP_d = HAP destruction efficiency of wastewater treatment plant (pounds of HAPs per ton of ODP);

RME_{fr} = flow rate of raw mill effluent (millions of gallons per day);

RME_c = HAP concentration of raw mill effluent (milligrams per liter);

PPC_{fr} = flow rate of pulping process condensates (millions of gallons per day);

PPC_c = HAP concentration of pulping process condensates (milligrams per liter);

ABD_{fr} = flow rate of anaerobic basin discharge (millions of gallons per day);

ABD_c = HAP concentration of anaerobic basin discharge (milligrams per liter); and

ODP_r = rate of production of oven dried pulp (tons per day).

(5) *Monitoring requirements and parameter ranges.* (i) The owner or operator shall install, calibrate, operate, and maintain according to the manufacturer's specifications a continuous monitoring system (CMS, as defined in §63.2), using a continuous recorder, to monitor the following parameters:

(A) Evaporator indirect contact condenser vent temperature;

(B) Pulping process condensates flow rate;

(C) Wastewater treatment plant effluent flow rate; and

(D) Production rate of ODP.

(ii) The owner or operator shall additionally monitor, on a daily basis, in each of the four anaerobic basins, the ratio of volatile acid to alkalinity (VA/A ratio). The owner or operator shall use the test methods identified for determining acidity and alkalinity as specified in 40 CFR 136.3, Table 1B.

(iii) The temperature of the evaporator indirect contact condenser vent shall be maintained at or below 140 °F on a continuous basis.

(iv) The VA/A ratio in each of the four anaerobic basins shall be maintained at or below 0.5 on a continuous basis.

(A) The owner or operator shall measure the methanol concentration of the outfall of any basin, using NCASI Method DI/MEOH 94.03 (incorporated by reference, see §63.14), when the VA/A ratio of that basin exceeds the following:

(*1*) 0.38, or

(*2*) The highest VA/A ratio at which the outfall of any basin has previously measured non-detect for methanol, using NCASI Method DI/MEOH 94.03 (incorporated by reference, see §63.14).

(B) If the outfall of that basin measures detect for methanol, the owner or operator shall verify compliance with the emission standard specified in paragraph (b)(4) of this section by conducting a performance test pursuant to the requirements specified in paragraph (b)(8) of this section.

(v) The owner or operator may seek to establish or reestablish the parameter ranges, and/or the parameters required to be monitored as provided in paragraphs (b)(5)(i) through (v) of this section, by following the provisions of §63.453(n)(1) through (4).

(6) *Standards and monitoring requirements for each enclosure and closed-vent system.* (i) The owner or operator shall comply with the design and operational requirements specified in paragraphs (b)(6)(ii) through (iv) of this section, and the monitoring requirements of paragraphs (b)(6)(v) through (x) of this section for each enclosure and closed-vent system used for collecting and routing of HAP emissions as specified in paragraph (b)(2) of this section.

(ii) Each enclosure shall be maintained at negative pressure at each enclosure or hood opening as demonstrated by the procedures specified in §63.457(e). Each enclosure or hood opening closed during the initial performance test shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.

(iii) Each component of the closed-vent system that is operated at positive pressure shall be designed for and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume above background, as measured by the procedures specified in §63.457(d).

(iv) Each bypass line in the closed-vent system that could divert vent streams containing HAPs to the atmosphere without meeting the routing requirements specified in paragraph (b)(2) of this section shall comply with either of the following requirements:

(A) On each bypass line, the owner or operator shall install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or

(B) For bypass line valves that are not computer controlled, the owner or operator shall maintain the bypass line valve in the closed position with a car seal or seal placed on the valve or closure mechanism in such a way that the valve or closure mechanism cannot be opened without breaking the seal.

(v) For each enclosure opening, the owner or operator shall perform, at least once every 30 days, a visual inspection of the closure mechanism specified in paragraph (b)(6)(ii) of this section to ensure the opening is maintained in the closed position and sealed.

(vi) For each closed-vent system required by paragraph (b)(2) of this section, the owner or operator shall perform a visual inspection every 30 days and at other times as requested by the Administrator. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

(vii) For positive pressure closed-vent systems, or portions of closed-vent systems, the owner or operator shall demonstrate no detectable leaks as specified in paragraph (b)(6)(iii) of this section, measured initially and annually by the procedures in §63.457(d).

(viii) For each enclosure that is maintained at negative pressure, the owner or operator shall demonstrate initially and annually that it is maintained at negative pressure as specified in §63.457(e).

(ix) For each valve or closure mechanism as specified in paragraph (b)(6)(iv)(B) of this section, the owner or operator shall perform an inspection at least once every 30 days to ensure that the valve is maintained in the closed position and the emissions point gas stream is not diverted through the bypass line.

(x) If an inspection required by paragraph (b)(6) of this section identifies visible defects in ductwork, piping, enclosures, or connections to covers required by paragraph (b)(6) of this section, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if the enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as follows:

(A) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

(B) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified.

(7) *Standards and monitoring requirements for the pulping process condensates closed collection system.* (i) The owner or operator shall comply with the design and operational requirements specified in paragraphs (b)(7)(ii)

through (iii) of this section, and monitoring requirements of paragraph (b)(7)(iv) for the equipment systems in paragraph (b)(3) of this section used to route the pulping process condensates in a closed collection system.

(ii) Each closed collection system shall meet the individual drain system requirements specified in §§63.960, 63.961, and 63.962, except that the closed vent systems shall be designed and operated in accordance with paragraph (b)(6) of this section, instead of in accordance with §63.693 as specified in §63.692(a)(3)(ii), (b)(3)(ii)(A), and (b)(3)(ii)(B)(5)(iii); and

(iii) If a condensate tank is used in the closed collection system, the tank shall meet the following requirements:

(A) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system that meets the requirements of paragraph (b)(6) of this section and routed in accordance with paragraph (b)(2) of this section; and

(B) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAPs removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(iv) For each pulping process condensate closed collection system used to comply with paragraph (b)(3) of this section, the owner or operator shall perform a visual inspection every 30 days and shall comply with the inspection and monitoring requirements specified in §63.964 except for the closed-vent system and control device inspection and monitoring requirements specified in §63.964(a)(2).

(8) *Quarterly performance testing.* (i) The owner or operator shall, within 45 days after the beginning of each quarter, conduct a performance test.

(ii) The owner or operator shall use NCASI Method DI/HAPS-99.01 (incorporated by reference, see §63.14) to collect a grab sample and determine the HAP concentration of the Raw Mill Effluent, Pulping Process Condensates, and Anaerobic Basin Discharge for the quarterly performance test conducted during the first quarter each year.

(iii) For each of the remaining three quarters, the owner or operator may use NCASI Method DI/MEOH 94.03 (incorporated by reference, see §63.14) as a surrogate to collect and determine the HAP concentration of the Raw Mill Effluent, Pulping Process Condensates, and Anaerobic Basin Discharge.

(iv) The sample used to determine the HAP or Methanol concentration in the Raw Mill Effluent, Pulping Process Condensates, or Anaerobic Basin Discharge shall be a composite of four grab samples taken evenly spaced over an eight hour time period.

(v) The Raw Mill Effluent grab samples shall be taken from the raw mill effluent composite sampler.

(vi) The Pulping Process Condensates grab samples shall be taken from a line tap on the closed condensate collection system prior to discharge into the wastewater treatment plant.

(vii) The Anaerobic Basic Discharge grab samples shall be taken subsequent to the confluence of the four anaerobic basin discharges.

(viii) The flow rate of the Raw Mill Effluent, Pulping Process Condensates, and Anaerobic Basin Discharge, and the production rate of ODP shall be averaged over eight hours.

(ix) The data collected as specified in paragraphs (b)(5) and (b)(8) of this section shall be used to determine the HAP destruction efficiency of the wastewater treatment plant as specified in paragraph (b)(4)(ii) of this section.

(x) The HAP destruction efficiency shall be at least as great as that specified by paragraph (b)(4)(i) of this section.

(9) *Recordkeeping requirements.* (i) The owner or operator shall comply with the recordkeeping requirements as specified in Table 1 of subpart S of part 63 as it pertains to §63.10.

(ii) The owner or operator shall comply with the recordkeeping requirements as specified in §63.454(b).

(iii) The owner or operator shall comply with the recordkeeping requirements as specified in §63.453(d).

(10) *Reporting requirements.* (i) Each owner or operator shall comply with the reporting requirements as specified in Table 1 of §63.10.

(ii) Each owner or operator shall comply with the reporting requirements as specified in §63.455(d).

(11) *Violations.* (i) Failure to comply with any applicable provision of this part shall constitute a violation.

(ii) Periods of excess emissions shall not constitute a violation provided the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed one percent. All periods of excess emission shall be reported, and shall include:

(iii) Notwithstanding paragraph (b)(11)(ii) of this section, any excess emissions that present an imminent threat to public health or the environment, or may cause serious harm to public health or the environment, shall constitute a violation.

[66 FR 34124, June 27, 2001, as amended at 66 FR 52538, Oct. 16, 2001; 69 FR 19740, Apr. 13, 2004; 77 FR 55713, Sept. 11, 2012]

Table 1 to Subpart S of Part 63—General Provisions Applicability to Subpart Sa

Reference	Applies to subpart S	Comment
63.1(a)(1)-(3)	Yes	
63.1(a)(4)	Yes	Subpart S (this table) specifies applicability of each paragraph in subpart A to subpart S.
63.1(a)(5)	No	Section reserved.
63.1(a)(6)	Yes	
63.1(a)(7)-(9)	No	Sections reserved.
63.1(a)(10)	No	Subpart S and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)-(12)	Yes	
63.1(b)(1)	No	Subpart S specifies its own applicability.
63.1(b)(2)	No	Section reserved.
63.1(b)(3)	Yes	
63.1(c)(1)-(2)	Yes	
63.1(c)(3)-(4)	No	Sections reserved.
63.1(c)(5)	Yes	
63.1(d)	No	Section reserved.
63.1(e)	Yes	

63.2	Yes	
63.3	Yes	
63.4(a)(1)-(2)	Yes	
63.4(a)(3)-(5)	No	Sections reserved.
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Section reserved.
63.5(b)(3)-(4)	Yes	
63.5(b)(5)	No	Section reserved.
63.5(b)(6)	Yes	
63.5(c)	No	Section reserved.
63.5(d)	Yes	
63.5(e)	Yes	
63.5(f)	Yes	
63.6(a)	Yes	
63.6(b)(1)-(5)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(b)(6)	No	Section reserved.
63.6(b)(7)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(c)(1)-(2)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(c)(3)-(4)	No	Sections reserved.
63.6(c)(5)	No	Subpart S specifies compliance dates for sources subject to subpart S.
63.6(d)	No	Section reserved.
63.6(e)(1)(i)	No	See §63.453(q) for general duty requirement.
63.6(e)(1)(ii)	No	
63.6(e)(1)(iii)	Yes	
63.6(e)(2)	No	Section reserved.
63.6(e)(3)	No	
63.6(f)(1)	No	
63.6(f)(2)-(3)	Yes	
63.6(g)	Yes	
63.6(h)(1)-(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(h)(3)	No	Section reserved.
63.6(h)(4)-(9)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.6(i)(1)-(14)	Yes	
63.6(i)(15)	No	Section reserved.

63.6(i)(16)	Yes	
63.6(j)	Yes	
63.7(a)	Yes	
63.7(b)	Yes	
63.7(c)	Yes	
63.7(d)	Yes	
63.7(e)(1)	No	Replaced with §63.457(o), which specifies performance testing conditions under subpart S.
63.7(e)(2)-(4)	Yes	
63.7(f)	Yes	
63.7(g)(1)	Yes	
63.7(g)(2)	No	Section reserved.
63.7(g)(3)	Yes	
63.7(h)	Yes	
63.8(a)(1)-(2)	Yes	
63.8(a)(3)	No	Section reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart S specifies locations to conduct monitoring.
63.8(b)(3)	Yes	
63.8(c)(1)-(c)(1)(i)	No	See §63.453(q) for general duty requirement (which includes monitoring equipment).
63.8(c)(1)(ii)	Yes	
63.8(c)(1)(iii)	No	
63.8(c)(2)-(3)	Yes	
63.8(c)(4)	No	Subpart S allows site specific determination of monitoring frequency in §63.453(n)(4).
63.8(c)(5)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.8(c)(6)-(8)	Yes	
63.8(d)(1)-(2)	Yes	
63.8(d)(3)	Yes, except for last sentence, which refers to an SSM plan	SSM plans are not required
63.8(e)	Yes	
63.8(f)(1)-(5)	Yes	
63.8(f)(6)	No	Subpart S does not specify relative accuracy test for CEMs.
63.8(g)	Yes	
63.9(a)	Yes	
63.9(b)(1)-(2)	Yes	Initial notifications must be submitted within one year after the source becomes subject to the relevant standard.
63.9(b)(3)	No	Section reserved.
63.9(b)(4)-(5)	Yes	
63.9(c)	Yes	

63.9(d)	No	Special compliance requirements are only applicable to kraft mills.
63.9(e)	Yes	
63.9(f)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(1)	Yes	
63.9(g)(2)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.9(g)(3)	No	Subpart S does not specify relative accuracy tests, therefore no notification is required for an alternative.
63.9(h)(1)-(3)	Yes	
63.9(h)(4)	No	Section reserved.
63.9(h)(5)-(6)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)(i)	No	
63.10(b)(2)(ii)	No	See §63.454(g) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
63.10(b)(2)(iii)	Yes	
63.10(b)(2)(iv)-(v)	No	
63.10(b)(2)(vi)-(xiv)	Yes	
63.10(b)(3)	Yes	
63.10(c)(1)	Yes	
63.10(c)(2)-(4)	No	Sections reserved.
63.10(c)(5)-(8)	Yes	
63.10(c)(9)	No	Section reserved.
63.10(c)(10)-(11)	No	See §63.454(g) for malfunction recordkeeping requirements.
63.10(c)(12)-(14)	Yes	
63.10(c)(15)	No	
63.10(d)(1)-(2)	Yes	
63.10(d)(3)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(d)(4)	Yes	
63.10(d)(5)	No	See §63.455(g) for malfunction reporting requirements.
63.10(e)(1)	Yes	
63.10(e)(2)(i)	Yes	
63.10(e)(2)(ii)	No	Pertains to continuous opacity monitors that are not part of this standard.
63.10(e)(3)	Yes	
63.10(e)(4)	No	Pertains to continuous opacity monitors that are not part of this

		standard.
63.10(f)	Yes	
63.11-63.15	Yes	

[a] Wherever subpart A specifies “postmark” dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

[77 FR 55713, Sept. 11, 2012]

Appendix E

40 CFR Part 63, Subpart MM—*National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart MM—National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills

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SOURCE: 66 FR 3193, Jan. 12, 2001, unless otherwise noted.

§63.860   Applicability and designation of affected source.

(a) The requirements of this subpart apply to the owner or operator of each kraft, soda, sulfite, or stand-alone semichemical pulp mill that is a major source of hazardous air pollutants (HAP) emissions as defined in §63.2.

(b) *Affected sources.* The requirements of this subpart apply to each new or existing affected source listed in paragraphs (b)(1) through (7) of this section:

(1) Each existing chemical recovery system (as defined in §63.861) located at a kraft or soda pulp mill.

(2) Each new nondirect contact evaporator (NDCE) recovery furnace and associated smelt dissolving tank(s) located at a kraft or soda pulp mill.

(3) Each new direct contact evaporator (DCE) recovery furnace system (as defined in §63.861) and associated smelt dissolving tank(s) located at a kraft or soda pulp mill.

(4) Each new lime kiln located at a kraft or soda pulp mill.

(5) Each new or existing sulfite combustion unit located at a sulfite pulp mill, except such existing units at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. AP-10).

(6) Each new or existing semichemical combustion unit located at a stand-alone semichemical pulp mill.

(7) The requirements of the alternative standard in §63.862(d) apply to the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14).

(c) The requirements of the General Provisions in subpart A of this part that apply to the owner or operator subject to the requirements of this subpart are identified in Table 1 to this subpart.

[66 FR 3193, Jan. 12, 2001, as amended at 68 FR 7713, Feb. 18, 2003]

§63.861   Definitions.

All terms used in this subpart are defined in the Clean Air Act, in subpart A of this part, or in this section. For the purposes of this subpart, if the same term is defined in subpart A or any other subpart of this part and in this section, it must have the meaning given in this section.

Bag leak detection system means an instrument that is capable of monitoring PM loadings in the exhaust of a fabric filter in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative PM loadings.

Black liquor means spent cooking liquor that has been separated from the pulp produced by the kraft, soda, or semichemical pulping process.

Black liquor gasification means the thermochemical conversion of black liquor into a combustible gaseous product.

Black liquor oxidation (BLO) system means the vessels used to oxidize the black liquor, with air or oxygen, and the associated storage tank(s).

Black liquor solids (BLS) means the dry weight of the solids in the black liquor that enters the recovery furnace or semichemical combustion unit.

Black liquor solids firing rate means the rate at which black liquor solids are fed to the recovery furnace or the semichemical combustion unit.

Chemical recovery combustion source means any source in the chemical recovery area of a kraft, soda, sulfite or stand-alone semichemical pulp mill that is an NDCE recovery furnace, a DCE recovery furnace system, a smelt dissolving tank, a lime kiln, a sulfite combustion unit, or a semichemical combustion unit.

Chemical recovery system means all existing DCE and NDCE recovery furnaces, smelt dissolving tanks, and lime kilns at a kraft or soda pulp mill. Each existing recovery furnace, smelt dissolving tank, or lime kiln is considered a process unit within a chemical recovery system.

Direct contact evaporator (DCE) recovery furnace means a kraft or soda recovery furnace equipped with a direct contact evaporator that concentrates strong black liquor by direct contact between the hot recovery furnace exhaust gases and the strong black liquor.

Direct contact evaporator (DCE) recovery furnace system means a direct contact evaporator recovery furnace and any black liquor oxidation system, if present, at the pulp mill.

Dry electrostatic precipitator (ESP) system means an electrostatic precipitator with a dry bottom (*i.e.*, no black liquor, water, or other fluid is used in the ESP bottom) and a dry particulate matter return system (*i.e.*, no black liquor, water, or other fluid is used to transport the collected PM to the mix tank).

Fabric filter means an air pollution control device used to capture PM by filtering a gas stream through filter media; also known as a baghouse.

Hazardous air pollutants (HAP) metals means the sum of all emissions of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A) and with all nondetect data treated as one-half of the method detection limit.

Hog fuel dryer means the equipment that combusts fine particles of wood waste (hog fuel) in a fluidized bed and directs the heated exhaust stream to a rotary dryer containing wet hog fuel to be dried prior to combustion in the hog fuel boiler at Weyerhaeuser Paper Company's Cosmopolis, Washington facility. The hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility is Emission Unit no. HD-14.

Kraft pulp mill means any stationary source that produces pulp from wood by cooking (digesting) wood chips in a solution of sodium hydroxide and sodium sulfide. The recovery process used to regenerate cooking chemicals is also considered part of the kraft pulp mill.

Kraft recovery furnace means a recovery furnace that is used to burn black liquor produced by the kraft pulping process, as well as any recovery furnace that burns black liquor produced from both the kraft and semichemical pulping processes, and includes the direct contact evaporator, if applicable. Includes black liquor gasification.

Lime kiln means the combustion unit (*e.g.,* rotary lime kiln or fluidized-bed calciner) used at a kraft or soda pulp mill to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide (CaO).

Lime production rate means the rate at which dry lime, measured as CaO, is produced in the lime kiln.

Method detection limit means the minimum concentration of an analyte that can be determined with 99 percent confidence that the true value is greater than zero.

Modification means, for the purposes of §63.862(a)(1)(ii)(E)(*1*), any physical change (excluding any routine part replacement or maintenance) or operational change (excluding any operational change that occurs during a start-up, shutdown, or malfunction) that is made to the air pollution control device that could result in an increase in PM emissions.

Nondetect data means, for the purposes of this subpart, any value that is below the method detection limit.

Nondirect contact evaporator (NDCE) recovery furnace means a kraft or soda recovery furnace that burns black liquor that has been concentrated by indirect contact with steam.

Particulate matter (PM) means total particulate matter as measured by EPA Method 5, EPA Method 17 (§63.865(b)(1)), or EPA Method 29 (40 CFR part 60, appendix A).

Process unit means an existing DCE or NDCE recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda mill.

Recovery furnace means an enclosed combustion device where concentrated black liquor produced by the kraft or soda pulping process is burned to recover pulping chemicals and produce steam. Includes black liquor gasification.

Regenerative thermal oxidizer (RTO) means a thermal oxidizer that transfers heat from the exhaust gas stream to the inlet gas stream by passing the exhaust stream through a bed of ceramic stoneware or other heat-absorbing medium before releasing it to the atmosphere, then reversing the gas flow so the inlet gas stream passes through the heated bed, raising the temperature of the inlet stream close to or at its ignition temperature.

Semichemical combustion unit means any equipment used to combust or pyrolyze black liquor at stand-alone semichemical pulp mills for the purpose of chemical recovery. Includes black liquor gasification.

Similar process units means all existing DCE and NDCE recovery furnaces, smelt dissolving tanks, or lime kilns at a kraft or soda pulp mill.

Smelt dissolving tanks (SDT) means vessels used for dissolving the smelt collected from a kraft or soda recovery furnace.

Soda pulp mill means any stationary source that produces pulp from wood by cooking (digesting) wood chips in a sodium hydroxide solution. The recovery process used to regenerate cooking chemicals is also considered part of the soda pulp mill.

Soda recovery furnace means a recovery furnace used to burn black liquor produced by the soda pulping process and includes the direct contact evaporator, if applicable. Includes black liquor gasification.

Stand-alone semichemical pulp mill means any stationary source that produces pulp from wood by partially digesting wood chips in a chemical solution followed by mechanical defibrating (grinding), and has an onsite chemical recovery process that is not integrated with a kraft pulp mill.

Startup means, for the chemical recovery system employing black liquor gasification at Georgia-Pacific's facility in Big Island, Virginia only, the end of the gasification system commissioning phase. Commissioning is that period of time in which each part of the new gasification system will be checked and operated on its own to make sure it is installed and functions properly. Commissioning will conclude with the successful completion of the gasification technology supplier's performance warranty demonstration, which proves the technology and equipment are performing to warranted levels and the system is ready to be placed in active service. For all other affected sources under this subpart, startup has the meaning given in §63.2.

Sulfite combustion unit means a combustion device, such as a recovery furnace or fluidized-bed reactor, where spent liquor from the sulfite pulping process (i.e., red liquor) is burned to recover pulping chemicals.

Sulfite pulp mill means any stationary source that produces pulp from wood by cooking (digesting) wood chips in a solution of sulfurous acid and bisulfite ions. The recovery process used to regenerate cooking chemicals is also considered part of the sulfite pulp mill.

Total hydrocarbons (THC) means the sum of organic compounds measured as carbon using EPA Method 25A (40 CFR part 60, appendix A).

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001; 68 FR 7713, Feb. 18, 2003]

§63.862 Standards.

(a) *Standards for HAP metals: existing sources.* (1) Each owner or operator of an existing kraft or soda pulp mill must comply with the requirements of either paragraph (a)(1)(i) or (ii) of this section.

(i) Each owner or operator of a kraft or soda pulp mill must comply with the PM emissions limits in paragraphs (a)(1)(i)(A) through (C) of this section.

(A) The owner or operator of each existing kraft or soda recovery furnace must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.10 gram per dry standard cubic meter (g/dscm) (0.044 grain per dry standard cubic foot (gr/dscf)) corrected to 8 percent oxygen.

(B) The owner or operator of each existing kraft or soda smelt dissolving tank must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.10 kilogram per megagram (kg/Mg) (0.20 pound per ton (lb/ton)) of black liquor solids fired.

(C) The owner or operator of each existing kraft or soda lime kiln must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.15 g/dscm (0.064 gr/dscf) corrected to 10 percent oxygen.

(ii) As an alternative to meeting the requirements of §63.862(a)(1)(i), each owner or operator of a kraft or soda pulp mill may establish PM emissions limits for each existing kraft or soda recovery furnace, smelt dissolving tank, and lime kiln that operates 6,300 hours per year or more by:

(A) Establishing an overall PM emission limit for each existing process unit in the chemical recovery system at the kraft or soda pulp mill using the methods in §63.865(a)(1) and (2).

(B) The emissions limits for each kraft recovery furnace, smelt dissolving tank, and lime kiln that are used to establish the overall PM limit in paragraph (a)(1)(ii)(A) of this section must not be less stringent than the emissions limitations required by §60.282 of part 60 of this chapter for any kraft recovery furnace, smelt dissolving tank, or lime kiln that is subject to the requirements of §60.282.

(C) Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must ensure that the PM emissions discharged to the atmosphere from each of these sources are less than or equal to the applicable PM emissions limits, established using the methods in §63.865(a)(1), that are used to establish the overall PM emissions limits in paragraph (a)(1)(ii)(A) of this section.

(D) Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln must reestablish the emissions limits determined in paragraph (a)(1)(ii)(A) of this section if either of the actions in paragraphs (a)(1)(ii)(D)(*1*) and (*2*) of this section are taken:

(*1*) The air pollution control system for any existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established in paragraph (a)(1)(ii)(A) of this section is modified (as defined in §63.861) or replaced; or

(*2*) Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln for which an emission limit was established in paragraph (a)(1)(ii)(A) of this section is shut down for more than 60 consecutive days.

(iii) Each owner or operator of an existing kraft or soda recovery furnace, smelt dissolving tank, or lime kiln that operates less than 6,300 hours per year must comply with the applicable PM emissions limits for that process unit provided in paragraph (a)(1)(i) of this section.

(2) Except as specified in paragraph (d) of this section, the owner or operator of each existing sulfite combustion unit must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.092 g/dscm (0.040 gr/dscf) corrected to 8 percent oxygen.

(b) *Standards for HAP metals: new sources.* (1) The owner or operator of any new kraft or soda recovery furnace must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.034 g/dscm (0.015 gr/dscf) corrected to 8 percent oxygen.

(2) The owner or operator of any new kraft or soda smelt dissolving tank must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.06 kg/Mg (0.12 lb/ton) of black liquor solids fired.

(3) The owner or operator of any new kraft or soda lime kiln must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.023 g/dscm (0.010 gr/dscf) corrected to 10 percent oxygen.

(4) The owner or operator of any new sulfite combustion unit must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.046 g/dscm (O.020 gr/dscf) corrected to 8 percent oxygen.

(c) *Standards for gaseous organic HAP.* (1) The owner or operator of any new recovery furnace at a kraft or soda pulp mill must ensure that the concentration or gaseous organic HAP, as meauared by methanol, discharged to the atmosphere is no greater than 0.012 kg/Mg (0.025 lb/ton) of black liquor solids fired.

(2) The owner or operator of each existing or new semichemical combustion unit must ensure that:

(i) The concentration of gaseous organic HAP, as measured by total hydrocarbons reported as carbon, discharged to the atmosphere is less than or equal to 1.49 kg/Mg (2.97 lb/ton) of black liquor solids fired; or

(ii) The gaseous organic HAP emissions, as measured by total hydrocarbons reported as carbon, are reduced by at least 90 percent prior to discharge of the gases to the atmosphere.

(d) *Alternative standard.* As an alternative to meeting the requirements of paragraph (a)(2) of this section, the owner or operator of the existing hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14) must ensure that the mass of PM in the exhaust gases discharged to the atmosphere from the hog fuel dryer is less than or equal to 4.535 kilograms per hour (kg/hr) (10.0 pounds per hour (lb/hr)).

[66 FR 3193, Jan. 12, 2001, as amended at 68 FR 7713, Feb. 18, 2003; 68 FR 67954, Dec. 5, 2003]

§63.863 Compliance dates.

(a) The owner or operator of an existing affected source or process unit must comply with the requirements in this subpart no later than March 13, 2004.

(b) The owner or operator of a new affected source that has an initial startup date after March 13, 2001 must comply with the requirements in this subpart immediately upon startup of the affected source, except as specified in §63.6(b).

(c) The two existing semichemical combustion units at Georgia-Pacific Corporation's Big Island, VA facility must comply with the requirements of this subpart no later than March 13, 2004, except as provided in paragraphs (c)(1) and (c)(2) of this section.

(1) If Georgia-Pacific Corporation constructs a new black liquor gasification system at Big Island, VA, determines that its attempt to start up the new system has been a failure and, therefore, must construct another type of chemical recovery unit to replace the two existing semichemical combustion units at Big Island, then the two existing semichemical combustion units must comply with the requirements of this subpart by the earliest of the following dates: three years after Georgia-Pacific declares the gasification system a failure, upon startup of the new replacement unit(s), or March 1, 2008.

(2) After March 13, 2004 and if Georgia-Pacific Corporation constructs and successfully starts up a new black liquor gasification system, the provisions of this subpart will not apply to the two existing semichemical combustion units at Georgia-Pacific's facility in Big Island, VA for up to 1500 hours, while Georgia-Pacific conducts trials of the new gasification system on black liquor from a Kraft pulp mill.

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001; 66 FR 37593, July 19, 2001; 68 FR 46108, Aug. 5, 2003]

§63.864 Monitoring requirements.

(a)-(c) [Reserved]

(d) *Continuous opacity monitoring system (COMS).* The owner or operator of each affected kraft or soda recovery furnace or lime kiln equipped with an ESP must install, calibrate, maintain, and operate a COMS according to the provisions in §§63.6(h) and 63.8 and paragraphs (d)(1) through (4) of this section.

(1)-(2) [Reserved]

(3) As specified in §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in §63.8(g)(2).

(e) *Continuous parameter monitoring system (CPMS).* For each CPMS required in this section, the owner or operator of each affected source or process unit must meet the requirements in paragraphs (e)(1) through (14) of this section.

(1)-(9) [Reserved]

(10) The owner or operator of each affected kraft or soda recovery furnace, kraft or soda lime kiln, sulfite combustion unit, or kraft or soda smelt dissolving tank equipped with a wet scrubber must install, calibrate, maintain, and operate a CPMS that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in §63.8(c), as well as the procedures in paragraphs (e)(10)(i) and (ii) of this section:

(i) The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (±2 inches of water gage pressure); and

(ii) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

(11) The owner or operator of each affected semichemical combustion unit equipped with an RTO must install, calibrate, maintain, and operate a CPMS that can be used to determine and record the operating temperature of the RTO at least once every successive 15-minute period using the procedures in §63.8(c). The monitor must compute and record the operating temperature at the point of incineration of effluent gases that are emitted using a temperature monitor accurate to within ±1 percent of the temperature being measured.

(12) The owner or operator of the affected hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14) must meet the requirements in paragraphs (e)(12)(i) through (xi) of this section for each bag leak detection system.

(i) The owner or operator must install, calibrate, maintain, and operate each triboelectric bag leak detection system according to the "Fabric Filter Bag Leak Detection Guidance," (EPA-454/R-98-015, September 1997). This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality Planning and Standards; Emissions, Monitoring and Analysis Division; Emission Measurement Center, MD-D205-02, Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network under Emission Measurement Center Continuous Emission Monitoring. The owner or operator must install, calibrate, maintain, and operate other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations.

(ii) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(iii) The bag leak detection system sensor must provide an output of relative PM loadings.

(iv) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(v) The bag leak detection system must be equipped with an audible alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(vi) For positive pressure fabric filter systems, a bag leak detector must be installed in each baghouse compartment or cell.

(vii) For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(ix) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time according to section 5.0 of the “Fabric Filter Bag Leak Detection Guidance.”

(x) Following initial adjustment of the system, the sensitivity or range, averaging period, alarm set points, or alarm delay time may not be adjusted except as detailed in the site-specific monitoring plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition. Record each adjustment.

(xi) The owner or operator must record the results of each inspection, calibration, and validation check.

(13) The owner or operator of each affected source or process unit that uses an ESP, wet scrubber, RTO, or fabric filter may monitor alternative control device operating parameters subject to prior written approval by the Administrator.

(14) The owner or operator of each affected source or process unit that uses an air pollution control system other than an ESP, wet scrubber, RTO, or fabric filter must provide to the Administrator an alternative monitoring request that includes the site-specific monitoring plan described in paragraph (a) of this section, a description of the control device, test results verifying the performance of the control device, the appropriate operating parameters that will be monitored, and the frequency of measuring and recording to establish continuous compliance with the standards. The alternative monitoring request is subject to the Administrator's approval. The owner or operator of the affected source or process unit must install, calibrate, operate, and maintain the monitor(s) in accordance with the alternative monitoring request approved by the Administrator. The owner or operator must include in the information submitted to the Administrator proposed performance specifications and quality assurance procedures for the monitors. The Administrator may request further information and will approve acceptable test methods and procedures. The owner or operator must monitor the parameters as approved by the Administrator using the methods and procedures in the alternative monitoring request.

(f) [Reserved]

(g) The owner or operator of each affected source or process unit complying with the gaseous organic HAP standard of §63.862(c)(1) through the use of an NDCE recovery furnace equipped with a dry ESP system is not required to conduct any continuous monitoring to demonstrate compliance with the gaseous organic HAP standard.

(h)-(i) [Reserved]

(j) *Determination of operating ranges.* (1) During the initial performance test required in §63.865, the owner or operator of any affected source or process unit must establish operating ranges for the monitoring parameters in paragraphs (e)(10) through (14) of this section, as appropriate; or

(2) The owner or operator may base operating ranges on values recorded during previous performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in this subpart. The owner or operator of the affected source or process unit must certify that all control techniques and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained.

(3) The owner or operator of an affected source or process unit may establish expanded or replacement operating ranges for the monitoring parameter values listed in paragraphs (e)(10) through (14) of this section and established in paragraph (j)(1) or (2) of this section during subsequent performance tests using the test methods in §63.865.

(4) The owner or operator of the affected source or process unit must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values.

(5)-(6) [Reserved]

(k) *On-going compliance provisions.* (1) Following the compliance date, owners or operators of all affected sources or process units are required to implement corrective action if the monitoring exceedances in paragraphs (k)(1)(i) through (vi) of this section occur:

(i) For a new or existing kraft or soda recovery furnace or lime kiln equipped with an ESP, when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity;

(ii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, when any 3-hour average parameter value is outside the range of values established in paragraph (j) of this section.

(iii) For a new or existing semichemical combustion unit equipped with an RTO, when any 1-hour average temperature falls below the temperature established in paragraph (j) of this section;

(iv) For the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14), when the bag leak detection system alarm sounds.

(v) For an affected source or process unit equipped with an ESP, wet scrubber, RTO, or fabric filter and monitoring alternative operating parameters established in paragraph (e)(13) of this section, when any 3-hour average value is outside the range of parameter values established in paragraph (j) of this section; and

(vi) For an affected source or process unit equipped with an alternative air pollution control system and monitoring operating parameters approved by the Administrator as established in paragraph (e)(14) of this section, when any 3-hour average value is outside the range of parameter values established in paragraph (j) of this section.

(2) Following the compliance date, owners or operators of all affected sources or process units are in violation of the standards of §63.862 if the monitoring exceedances in paragraphs (k)(2)(i) through (vii) of this section occur:

(i) For an existing kraft or soda recovery furnace equipped with an ESP, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;

(ii) For a new kraft or soda recovery furnace or a new or existing lime kiln equipped with an ESP, when opacity is greater than 20 percent for 6 percent or more of the operating time within any quarterly period;

(iii) For a new or existing kraft or soda recovery furnace, kraft or soda smelt dissolving tank, kraft or soda lime kiln, or sulfite combustion unit equipped with a wet scrubber, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established in paragraph (j) of this section;

(iv) For a new or existing semichemical combustion unit equipped with an RTO, when any 3-hour average temperature falls below the temperature established in paragraph (j) of this section;

(v) For the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14), when corrective action is not initiated within 1 hour of a bag leak detection system alarm and the alarm is engaged for more than 5 percent of the total operating time in a 6-month block reporting period. In calculating the operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted; if corrective action is required, each alarm is counted as a minimum of 1 hour; if corrective action is not initiated within 1 hour, the alarm time is counted as the actual amount of time taken to initiate corrective action.

(vi) For an affected source or process unit equipped with an ESP, wet scrubber, RTO, or fabric filter and monitoring alternative operating parameters established in paragraph (e)(13) of this section, when six or more 3-hour average values within any 6-month reporting period are outside the range of parameter values established in paragraph (j) of this section; and

(vii) For an affected source or process unit equipped with an alternative air pollution control system and monitoring operating parameters approved by the Administrator as established in paragraph (e)(14) of this section, when six or more 3-hour average values within any 6-month reporting period are outside the range of parameter values established in paragraph (j) of this section.

(3) For purposes of determining the number of nonopacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period.

[68 FR 7713, Feb. 18, 2003, as amended at 68 FR 42605, July 18, 2003; 68 FR 67955, Dec. 5, 2003; 71 FR 20458, Apr. 20, 2006]

§63.865 Performance test requirements and test methods.

The owner or operator of each affected source or process unit subject to the requirements of this subpart is required to conduct an initial performance test using the test methods and procedures listed in §63.7 and paragraph (b) of this section, except as provided in paragraph (c)(1) of this section.

(a) The owner or operator of a process unit seeking to comply with a PM emission limit under §63.862(a)(1)(ii)(A) must use the procedures in paragraphs (a)(1) and (2) of this section:

(1) Determine the overall PM emission limit for the chemical recovery system at the mill using Equation 1 of this section as follows:

$$EL_{PM} = \frac{\left[\left(C_{ref,RF}\right)\left(Q_{RFtot}\right) + \left(C_{ref,LK}\right)\left(Q_{LKtot}\right)\right]\left(F1\right)}{\left(BLS_{tot}\right)} + ER1_{ref,SDT} \qquad \text{(Eq. 1)}$$

Where:

EL_{PM} = overall PM emission limit for all existing process units in the chemical recovery system at the kraft or soda pulp mill, kg/Mg (lb/ton) of black liquor solids fired.

$C_{ref,\ RF}$ = reference concentration of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen for existing kraft or soda recovery furnaces.

Q_{RFtot} = sum of the average volumetric gas flow rates measured during the performance test and corrected to 8 percent oxygen for all existing recovery furnaces in the chemical recovery system at the kraft or soda pulp mill, dry standard cubic meters per minute (dscm/min) (dry standard cubic feet per minute (dscf/min)).

$C_{ref,LK}$ = reference concentration of 0.15 g/dscm (0.064 gr/dscf) corrected to 10 percent oxygen for existing kraft or soda lime kilns.

Q_{LKtot} = sum of the average volumetric gas flow rates measured during the performance test and corrected to 10 percent oxygen for all existing lime kilns in the chemical recovery system at the kraft or soda pulp mill, dscm/min (dscf/min).

F1 = conversion factor, 1.44 minutes·kilogram/day·gram (min·kg/d·g) (0.206 minutes·pound/day·grain (min·b/d·gr)).

BLS_{tot} = sum of the average black liquor solids firing rates of all existing recovery furnaces in the chemical recovery system at the kraft or soda pulp mill measured during the performance test, megagrams per day (Mg/d) (tons per day (ton/d)) of black liquor solids fired.

$ER1_{ref, SDT}$ = reference emission rate of 0.10 kg/Mg (0.20 lb/ton) of black liquor solids fired for existing kraft or soda smelt dissolving tanks.

(2) Establish an emission limit for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln; and, using these emissions limits, determine the overall PM emission rate for the chemical recovery system at the mill using the procedures in paragraphs (a)(2)(i) through (v) of this section, such that the overall PM emission rate calculated in paragraph (a)(2)(v) of this section is less than or equal to the overall PM emission limit determined in paragraph (a)(1) of this section, as appropriate.

(i) The PM emission rate from each affected recovery furnace must be determined using Equation 2 of this section as follows:

$$ER_{RF} = (F1)(C_{EL,\,RF})(Q_{RF})/(BLS) \qquad (Eq.\ 2)$$

Where:

ER_{RF} = emission rate from each recovery furnace, kg/Mg (lb/ton) of black liquor solids.

F1=conversion factor, 1.44 min·kg/d·g (0.206 min·/d·gr).

$C_{EL,\,RF}$ = PM emission limit proposed by owner or operator for the recovery furnace, g/dscm (gr/dscf) corrected to 8 percent oxygen.

Q_{RF} = average volumetric gas flow rate from the recovery furnace measured during the performance test and corrected to 8 percent oxygen, dscm/min (dscf/min).

BLS=average black liquor solids firing rate of the recovery furnace measured during the performance test, Mg/d (ton/d) of black liquor solids.

(ii) The PM emission rate from each affected smelt dissolving tank must be determined using Equation 3 of this section as follows:

$$ER_{SDT} = (F1)(C_{EL,\,SDT})(Q_{SDT})/(BLS) \qquad (Eq.\ 3)$$

Where:

ER_{SDT} = emission rate from each SDT, kg/Mg (lb/ton) of black liquor solids fired.

F1=conversion factor, 1.44 min·kg/d•g (0.206 min·lb/d·gr).

$C_{EL,\,SDT}$ = PM emission limit proposed by owner or operator for the smelt dissolving tank, g/dscm (gr/dscf).

Q_{SDT} = average volumetric gas flow rate from the smelt dissolving tank measured during the performance test, dscm/min (dscf/min).

BLS=average black liquor solids firing rate of the associated recovery furnace measured during the performance test, Mg/d (ton/d) of black liquorsolids fired. If more than one SDT is used to dissolve the smelt from a given recovery furnace, then the black liquor solids firing rate of the furnace must be proportioned according to the size of the SDT.

(iii) The PM emission rate from each affected lime kiln must be determined using Equation 4 of this section as follows:

$$ER_{LK} = (F1)(C_{EL,\,LK})(Q_{LK})(CaO_{tot}/BLS_{tot})/(CaO_{LK}) \qquad (Eq.\ 4)$$

Where:

ER_{LK} = emission rate from each lime kiln, kg/Mg (lb/ton) of black liquor solids.

F1=conversion factor, 1.44 min·kg/d·g (0.206 min·lb/d·gr).

$C_{EL,LK}$ = PM emission limit proposed by owner or operator for the lime kiln, g/dscm (gr/dscf) corrected to 10 percent oxygen.

Q_{LK} = average volumetric gas flow rate from the lime kiln measured during the performance test and corrected to 10 percent oxygen, dscm/min (dscf/min).

CaO_{LK} = lime production rate of the lime kiln, measured as CaO during the performance test, Mg/d (ton/d) of CaO.

CaO_{tot} = sum of the average lime production rates for all existing lime kilns in the chemical recovery system at the mill measured as CaO during the performance test, Mg/d (ton/d).

BLS_{tot} = sum of the average black liquor solids firing rates of all recovery furnaces in the chemical recovery system at the mill measured during the performance test, Mg/d (ton/d) of black liquor solids.

(iv) If more than one similar process unit is operated in the chemical recovery system at the kraft or soda pulp mill, Equation 5 of this section must be used to calculate the overall PM emission rate from all similar process units in the chemical recovery system at the mill and must be used in determining the overall PM emission rate for the chemical recovery system at the mill:

$$ER_{PUtot} = ER_{PU1}\left(PR_{PU1}/PR_{tot}\right) + \ \ldots + \left(ER_{PUi}\right)\left(PR_{PUi}/PR_{tot}\right) \qquad (Eq.\ 5)$$

Where:

ER_{PUtot} = overall PM emission rate from all similar process units, kg/Mg (lb/ton) of black liquor solids fired.

ER_{PU1} = PM emission rate from process unit No. 1, kg/Mg (lb/ton) of black liquor solids fired, calculated using Equation 2, 3, or 4 in paragraphs (a)(2)(i) through (iii) of this section.

PR_{PU1} = black liquor solids firing rate in Mg/d (ton/d) for process unit No. 1, if process unit is a recovery furnace or SDT. The CaO production rate in Mg/d (ton/d) for process unit No. 1, if process unit is a lime kiln.

PR_{tot} = total black liquor solids firing rate in Mg/d (ton/d) for all recovery furnaces in the chemical recovery system at the kraft or soda pulp mill if the similar process units are recovery furnaces or SDT, or the total CaO production rate in Mg/d (ton/d) for all lime kilns in the chemical recovery system at the mill if the similar process units are lime kilns.

ER_{PUi} = PM emission rate from process unit No. i, kg/Mg (lb/ton) of black liquor solids fired.

PR_{PUi} = black liquor solids firing rate in Mg/d (ton/d) for process unit No. i, if process unit is a recovery furnace or SDT. The CaO production rate in Mg/d (ton/d) for process unit No. i, if process unit is a lime kiln.

i=number of similar process units located in the chemical recovery system at the kraft or soda pulp mill.

(v) The overall PM emission rate for the chemical recovery system at the mill must be determined using Equation 6 of this section as follows:

$$ER_{tot} = ER_{RFtot} + ER_{SDTtot} + ER_{LKtot} \qquad (Eq.\ 6)$$

Where:

ER_{tot} = overall PM emission rate for the chemical recovery system at the mill, kg/Mg (lb/ton) of black liquor solids fired.

ER_{RFtot} = PM emission rate from all kraft or soda recovery furnaces, calculated using Equation 2 or 5 in paragraphs (a)(2)(i) and (iv) of this section, where applicable, kg/Mg (lb/ton) of black liquor solids fired.

ER_{SDTtot} = PM emission rate from all smelt dissolving tanks, calculated using Equation 3 or 5 in paragraphs (a)(2)(ii) and (iv) of this section, where applicable, kg/Mg (lb/ton) of black liquor solids fired.

ER_{LKtot} = PM emission rate from all lime kilns, calculated using Equation 4 or 5 in paragraphs (a)(2)(iii) and (iv) of this section, where applicable, kg/Mg (lb/ton) of black liquor solids fired.

(vi) After the Administrator has approved the PM emissions limits for each kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, the owner or operator complying with an overall PM emission limit established in §63.862(a)(1)(ii) must demonstrate compliance with the HAP metals standard by demonstrating compliance with the approved PM emissions limits for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln, using the test methods and procedures in paragraph (b) of this section.

(b) The owner or operator seeking to determine compliance with §63.862(a), (b), or (d) must use the procedures in paragraphs (b)(1) through (6) of this section.

(1) For purposes of determining the concentration or mass of PM emitted from each kraft or soda recovery furnace, sulfite combustion unit, smelt dissolving tank, lime kiln, or the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14), Method 5 or 29 in appendix A of 40 CFR part 60 must be used, except that Method 17 in appendix A of 40 CFR part 60 may be used in lieu of Method 5 or Method 29 if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17, and the stack temperature is no greater than 205 °C (400 °F). For Methods 5, 29, and 17, the sampling time and sample volume for each run must be at least 60 minutes and 0.90 dscm (31.8 dscf), and water must be used as the cleanup solvent instead of acetone in the sample recovery procedure.

(2) For sources complying with §63.862(a) or (b), the PM concentration must be corrected to the appropriate oxygen concentration using Equation 7 of this section as follows:

$$C_{corr} = C_{meas} \times \frac{(21 - X)}{(21 - Y)} \qquad \text{(Eq. 7)}$$

Where:

C_{corr} = The measured concentration corrected for oxygen, g/dscm (gr/dscf);

C_{meas} = The measured concentration uncorrected for oxygen, g/dscm (gr/dscf);

X = The corrected volumetric oxygen concentration (8 percent for kraft or soda recovery furnaces and sulfite combustion units and 10 percent for kraft or soda lime kilns); and

Y = The measured average volumetric oxygen concentration.

(3) Method 3A or 3B in appendix A of 40 CFR part 60 must be used to determine the oxygen concentration. The voluntary consensus standard ANSI/ASME PTC 19.10-1981—Part 10 (incorporated by reference—see §63.14) may be used as an alternative to using Method 3B. The gas sample must be taken at the same time and at the same traverse points as the particulate sample.

(4) For purposes of complying with of §63.862(a)(1)(ii)(A), the volumetric gas flow rate must be corrected to the appropriate oxygen concentration using Equation 8 of this section as follows:

$Q_{corr} = Qmeas \times (21-Y)/(21-X)$ (Eq. 8)

Where:

Q_{corr} = the measured volumetric gas flow rate corrected for oxygen, dscm/min (dscf/min).

Q_{meas} = the measured volumetric gas flow rate uncorrected for oxygen, dscm/min (dscf/min).

Y=the measured average volumetric oxygen concentration.

X=the corrected volumetric oxygen concentration (8 percent for kraft or soda recovery furnaces and 10 percent for kraft or soda lime kilns).

(5)(i) For purposes of selecting sampling port location and number of traverse points, Method 1 or 1A in appendix A of 40 CFR part 60 must be used;

(ii) For purposes of determining stack gas velocity and volumetric flow rate, Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A of 40 CFR part 60 must be used;

(iii) For purposes of conducting gas analysis, Method 3, 3A, or 3B in appendix A of 40 CFR part 60 must be used. The voluntary consensus standard ANSI/ASME PTC 19.10-1981—Part 10 (incorporated by reference—see §63.14) may be used as an alternative to using Method 3B; and

(iv) For purposes of determining moisture content of stack gas, Method 4 in appendix A of 40 CFR part 60 must be used.

(6) Process data measured during the performance test must be used to determine the black liquor solids firing rate on a dry basis and the CaO production rate.

(c) The owner or operator of each affected source or process unit complying with the gaseous organic HAP standard in §63.862(c)(1) must demonstrate compliance according to the provisions in paragraphs (c)(1) and (2) of this section.

(1) The owner or operator complying through the use of an NDCE recovery furnace equipped with a dry ESP system is not required to conduct any performance testing to demonstrate compliance with the gaseous organic HAP standard.

(2) The owner or operator complying without using an NDCE recovery furnace equipped with a dry ESP system must use Method 308 in appendix A of this part, as well as the methods listed in paragraphs (b)(5)(i) through (iv) of this section. The sampling time and sample volume for each Method 308 run must be at least 60 minutes and 0.014 dscm (0.50 dscf), respectively.

(i) The emission rate from any new NDCE recovery furnace must be determined using Equation 9 of this section as follows:

$$ER_{NDCE} = \frac{(MR_{meas})}{BLS} \qquad \text{(Eq. 9)}$$

Where:

ER_{NDCE} = Methanol emission rate from the NDCE recovery furnace, kg/Mg (lb/ton) of black liquor solids fired;

MR_{meas} = Measured methanol mass emission rate from the NDCE recovery furnace, kg/hr (lb/hr); and

BLS = Average black liquor solids firing rate of the NDCE recovery furnace, megagrams per hour (Mg/hr) (tons per hour (ton/hr)) determined using process data measured during the performance test.

(ii) The emission rate from any new DCE recovery furnace system must be determined using Equation 10 of this section as follows:

$$ER_{DCE} = \left[\frac{(MR_{meas,RF})}{BLS_{RF}}\right] + \left[\frac{MR_{meas,BLO}}{BLS_{BLO}}\right] \qquad \text{(Eq. 10)}$$

Where:

ER_{DCE} = Methanol emission rate from each DCE recovery furnace system, kg/Mg (lb/ton) of black liquor solids fired;

$MR_{meas,RF}$ = Average measured methanol mass emission rate from each DCE recovery furnace, kg/hr (lb/hr);

$MR_{meas,BLO}$ = Average measured methanol mass emission rate from the black liquor oxidation system, kg/hr (lb/hr);

BLS_{RF} = Average black liquor solids firing rate for each DCE recovery furnace, Mg/hr (ton/hr) determined using process data measured during the performance test; and

BLS_{BLO} = The average mass rate of black liquor solids treated in the black liquor oxidation system, Mg/hr (ton/hr) determined using process data measured during the performance test.

(d) The owner or operator seeking to determine compliance with the gaseous organic HAP standards in §63.862(c)(2) for semichemical combustion units must use Method 25A in appendix A of 40 CFR part 60, as well as the methods listed in paragraphs (b)(5)(i) through (iv) of this section. The sampling time for each Method 25A run must be at least 60 minutes. The calibration gas for each Method 25A run must be propane.

(1) The emission rate from any new or existing semichemical combustion unit must be determined using Equation 11 of this section as follows:

$$ER_{SCCU} = \frac{(THC_{meas})}{BLS} \qquad (Eq.\ 11)$$

Where:

ER_{SCCU} = THC emission rate reported as carbon from each semichemical combustion unit, kg/Mg (lb/ton) of black liquor solids fired;

THC_{meas} = Measured THC mass emission rate reported as carbon, kg/hr (lb/hr); and

BLS = Average black liquor solids firing rate, Mg/hr (ton/hr); determined using process data measured during the performance test.

(2) If the owner or operator of the semichemical combustion unit has selected the percentage reduction standards for THC, under §63.862(c)(2)(ii), the percentage reduction in THC emissions is computed using Equation 12 of this section as follows, provided that Ei and Eo are measured simultaneously:

$$(\%R_{THC}) = \left(\frac{E_i - E_o}{E_i}\right) \times 100 \qquad (Eq.\ 12)$$

Where:

$\%R_{THC}$ = percentage reduction of total hydrocarbons emissions achieved.

E_i = measured THC mass emission rate at the THC control device inlet, kg/hr (lb/hr).

E_o = measured THC mass emission rate at the THC control device outlet, kg/hr (lb/hr).

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 37593, July 19, 2001; 68 FR 7716, Feb. 18, 2003; 68 FR 67955, Dec. 5, 2003]

§63.866 Recordkeeping requirements.

(a) *Startup, shutdown, and malfunction plan.* The owner or operator must develop a written plan as described in §63.6(e)(3) that contains specific procedures for operating the source and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with the standards. In addition to the information required in §63.6(e), the plan must include the requirements in paragraphs (a)(1) and (2) of this section.

(1) Procedures for responding to any process parameter level that is inconsistent with the level(s) established under §63.864(j), including the procedures in paragraphs (a)(1)(i) and (ii) of this section:

(i) Procedures to determine and record the cause of an operating parameter exceedance and the time the exceedance began and ended; and

(ii) Corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance.

(2) The startup, shutdown, and malfunction plan also must include the schedules listed in paragraphs (a)(2)(i) and (ii) of this section:

(i) A maintenance schedule for each control technique that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance; and

(ii) An inspection schedule for each continuous monitoring system required under §63.864 to ensure, at least once in each 24-hour period, that each continuous monitoring system is properly functioning.

(b) The owner or operator of an affected source or process unit must maintain records of any occurrence when corrective action is required under §63.864(k)(1), and when a violation is noted under §63.864(k)(2).

(c) In addition to the general records required by §63.10(b)(2), the owner or operator must maintain records of the information in paragraphs (c)(1) through (7) of this section:

(1) Records of black liquor solids firing rates in units of Mg/d or ton/d for all recovery furnaces and semichemical combustion units;

(2) Records of CaO production rates in units of Mg/d or ton/d for all lime kilns;

(3) Records of parameter monitoring data required under §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;

(4) Records and documentation of supporting calculations for compliance determinations made under §§63.865(a) through (d);

(5) Records of monitoring parameter ranges established for each affected source or process unit;

(6) Records certifying that an NDCE recovery furnace equipped with a dry ESP system is used to comply with the gaseous organic HAP standard in §63.862(c)(1).

(7) For the bag leak detection system on the hog fuel dryer fabric filter at Weyerhaeuser Paper Company's Cosmopolis, Washington facility (Emission Unit no. HD-14), records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken.

(d) For operation under §63.863(c)(2), Georgia-Pacific Corporation must keep a record of the hours of operation of the two existing semichemical combustion units at their Big Island, VA facility.

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001; 68 FR 7718, Feb. 18, 2003; 69 FR 25323, May 6, 2004; 71 FR 20458, Apr. 20, 2006]

§63.867 Reporting requirements.

(a) *Notifications.* (1) The owner or operator of any affected source or process unit must submit the applicable notifications from subpart A of this part, as specified in Table 1 of this subpart.

(2) Notifications specific to Georgia-Pacific Corporation's affected sources in Big Island, Virginia.

(i) For a compliance extension under §63.863(c)(1), submit a notice that provides the date of Georgia-Pacific's determination that the black liquor gasification system is not successful and the reasons why the technology is not successful. The notice must be submitted within 15 days of Georgia-Pacific's determination, but not later than March 16, 2005.

(ii) For operation under §63.863(c)(2), submit a notice providing: a statement that Georgia-Pacific Corporation intends to run the Kraft black liquor trials, the anticipated period in which the trials will take place, and a statement explaining why the trials could not be conducted prior to March 1, 2005. The notice must be submitted at least 30 days prior to the start of the Kraft liquor trials.

(3) In addition to the requirements in subpart A of this part, the owner or operator of the hog fuel dryer at Weyerhaeuser Paper Company's Cosmopolis, Washington, facility (Emission Unit no. HD-14) must include analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in §63.864(e)(12) in the Notification of Compliance Status.

(b) *Additional reporting requirements for HAP metals standards.* (1) Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) must submit the PM emissions limits determined in §63.865(a) for each affected kraft or soda recovery furnace, smelt dissolving tank, and lime kiln to the Administrator for approval. The emissions limits must be submitted as part of the notification of compliance status required under subpart A of this part.

(2) Any owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) must submit the calculations and supporting documentation used in §63.865(a)(1) and (2) to the Administrator as part of the notification of compliance status required under subpart A of this part.

(3) After the Administrator has approved the emissions limits for any process unit, the owner or operator of a process unit must notify the Administrator before any of the actions in paragraphs (b)(3)(i) through (iv) of this section are taken:

(i) The air pollution control system for any process unit is modified or replaced;

(ii) Any kraft or soda recovery furnace, smelt dissolving tank, or lime kiln in a chemical recovery system at a kraft or soda pulp mill complying with the PM emissions limits in §63.862(a)(1)(ii) is shut down for more than 60 consecutive days;

(iii) A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit is changed; or

(iv) The black liquor solids firing rate for any kraft or soda recovery furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.

(4) An owner or operator of a group of process units in a chemical recovery system at a mill complying with the PM emissions limits in §63.862(a)(1)(ii) and seeking to perform the actions in paragraph (b)(3)(i) or (ii) of this section must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation

required in paragraph (b)(2) of this section to the Administrator. All modified PM emissions limits are subject to approval by the Administrator.

(c) *Excess emissions report.* The owner or operator must report quarterly if measured parameters meet any of the conditions specified in paragraph (k)(1) or (2) of §63.864. This report must contain the information specified in §63.10(c) of this part as well as the number and duration of occurrences when the source met or exceeded the conditions in §63.864(k)(1), and the number and duration of occurrences when the source met or exceeded the conditions in §63.864(k)(2). Reporting excess emissions below the violation thresholds of §63.864(k) does not constitute a violation of the applicable standard.

(1) When no exceedances of parameters have occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period.

(2) The owner or operator of an affected source or process unit subject to the requirements of this subpart and subpart S of this part may combine excess emissions and/or summary reports for the mill.

[66 FR 3193, Jan. 12, 2001 as amended at 66 FR 16408, Mar. 26, 2001; 68 FR 7718, Feb. 18, 2003; 68 FR 42605, July 18, 2003; 68 FR 46108, Aug. 5, 2003; 69 FR 25323, May 6, 2004]

§63.868 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Clean Air Act, the authorities contained in paragraph (b) of this section must be retained by the Administrator and not transferred to a State.

(b) The authorities which will not be delegated to States are listed in paragraphs (b)(1) through (4) of this section:

(1) Approval of alternatives to standards in §63.862 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.

Table 1 to Subpart MM of Part 63—General Provisions Applicability to Subpart MM

General provisions reference	Summary of requirements	Applies to subpart MM	Explanation
63.1(a)(1)	General applicability of the General Provisions	Yes	Additional terms defined in §63.861; when overlap between subparts A and MM of this part, subpart MM takes precedence.
63.1(a)(2)-(14)	General applicability of the General Provisions	Yes	
63.1(b)(1)	Initial applicability determination.	No.	Subpart MM specifies the applicability in §63.860.
63.1(b)(2)	Title V operating permit—see 40 CFR part 70	Yes	All major affected sources are required to obtain a title V permit.
63.1(b)(3)	Record of the applicability determination	No	All affected sources are subject to

			subpart MM according to the applicability definition of subpart MM.
63.1(c)(1)	Applicability of subpart A of this part after a relevant standard has been set	Yes	Subpart MM clarifies the applicability of each paragraph of subpart A of this part to sources subject to subpart MM.
63.1(c)(2)	Title V permit requirement	Yes	All major affected sources are required to obtain a title V permit. There are no area sources in the pulp and paper mill source category.
63.1(c)(3)	[Reserved]	NA.	
63.1(c)(4)	Requirements for existing source that obtains an extension of compliance	Yes	
63.1(c)(5)	Notification requirements for an area source that increases HAP emissions to major source levels	Yes	
63.1(d)	[Reserved]	NA	
63.1(e)	Applicability of permit program before a relevant standard has been set	Yes	
63.2	Definitions	Yes	Additional terms defined in §63.861; when overlap between subparts A and MM of this part occurs, subpart MM takes precedence.
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities and circumvention	Yes	
63.5(a)	Construction and reconstruction—applicability	Yes	
63.5(b)(1)	Upon construction, relevant standards for new sources	Yes	
63.5(b)(2)	[Reserved]	NA	
63.5(b)(3)	New construction/reconstruction	Yes	
63.5(b)(4)	Construction/reconstruction notification	Yes	
63.5(b)(5)	Construction/reconstruction compliance	Yes	
63.5(b)(6)	Equipment addition or process change	Yes	
63.5(c)	[Reserved]	NA	
63.5(d)	Application for approval of construction/reconstruction	Yes	
63.5(e)	Construction/reconstruction approval	Yes	
63.5(f)	Construction/reconstruction approval based on prior State preconstruction review	Yes	
63.6(a)(1)	Compliance with standards and maintenance requirements—applicability	Yes	
63.6(a)(2)	Requirements for area source that increases emissions to become major	Yes	
63.6(b)	Compliance dates for new and	Yes	

	reconstructed sources		
63.6(c)	Compliance dates for existing sources	Yes, except for sources granted extensions under 63.863(c)	Subpart MM specifically stipulates the compliance schedule for existing sources.
63.6(d)	[Reserved]	NA	
63.6(e)	Operation and maintenance requirements	Yes	
63.6(f)	Compliance with nonopacity emissions standards	Yes	
63.6(g)	Compliance with alternative nonopacity emissions standards	Yes	
63.6(h)	Compliance with opacity and visible emissions (VE) standards	Yes	Subpart MM does not contain any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.6(i)	Extension of compliance with emission standards	Yes, except for sources granted extensions under 63.863(c)	
63.6(j)	Exemption from compliance with emissions standards	Yes	
63.7(a)(1)	Performance testing requirements—applicability	Yes	§63.865(c)(1) specifies the only exemption from performance testing allowed under subpart MM.
63.7(a)(2)	Performance test dates	Yes	
63.7(a)(3)	Performance test requests by Administrator under CAA section 114	Yes	
63.7(b)(1)	Notification of performance test	Yes	
63.7(b)(2)	Notification of delay in conducting a scheduled performance test	Yes	
63.7(c)	Quality assurance program	Yes	
63.7(d)	Performance testing facilities	Yes	
63.7(e)	Conduct of performance tests	Yes	
63.7(f)	Use of an alternative test method	Yes	
63.7(g)	Data analysis, recordkeeping, and reporting	Yes	
63.7(h)	Waiver of performance tests	Yes	§63.865(c)(1) specifies the only exemption from performance testing allowed under subpart MM.
63.8(a)	Monitoring requirements—applicability	Yes	See §63.864.
63.8(b)	Conduct of monitoring	Yes	See §63.864.
63.8(c)	Operation and maintenance of CMS	Yes	See §63.864.
63.8(d)	Quality control program	Yes	See §63.864.
63.8(e)(1)	Performance evaluation of CMS	Yes	
63.8(e)(2)	Notification of performance evaluation	Yes	
63.8(e)(3)	Submission of site-specific performance evaluation test plan	Yes	

63.8(e)(4)	Conduct of performance evaluation and performance evaluation dates	Yes	
63.8(e)(5)	Reporting performance evaluation results	Yes	
63.8(f)	Use of an alternative monitoring method	Yes	
63.8(g)	Reduction of monitoring data	Yes	
63.9(a)	Notification requirements—applicability and general information	Yes	
63.9(b)	Initial notifications	Yes	
63.9(c)	Request for extension of compliance	Yes	
63.9(d)	Notification that source subject to special compliance requirements	Yes	
63.9(e)	Notification of performance test	Yes	
63.9(f)	Notification of opacity and VE observations	Yes	Subpart MM does not contain any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.9(g)(1)	Additional notification requirements for sources with CMS	Yes	
63.9(g)(2)	Notification of compliance with opacity emissions standard	Yes	Subpart MM does not contain any opacity or VE emissions standards; however, §63.864 specifies opacity monitoring requirements.
63.9(g)(3)	Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded	Yes	
63.9(h)	Notification of compliance status	Yes	
63.9(i)	Adjustment to time periods or postmark deadlines for submittal and review of required communications	Yes	
63.9(j)	Change in information already provided	Yes	
63.10(a)	Recordkeeping requirements—applicability and general information	Yes	See §63.866.
63.10(b)(1)	Records retention	Yes	
63.10(b)(2)	Information and documentation to support notifications and demonstrate compliance	Yes	
63.10(b)(3)	Records retention for sources not subject to relevant standard	Yes	Applicability requirements are given in §63.860.
63.10(c)	Additional recordkeeping requirements for sources with CMS.	Yes	
63.10(d)(1)	General reporting requirements	Yes	
63.10(d)(2)	Reporting results of performance tests	Yes	
63.10(d)(3)	Reporting results of opacity or VE observations	Yes	Subpart MM does not include any opacity or VE standards; however, §63.864 specifies opacity monitoring requirements.
63.10(d)(4)	Progress reports	Yes	
63.10(d)(5)	Periodic and immediate startup,	Yes	

	shutdown, and malfunction reports		
63.10(e)	Additional reporting requirements for sources with CMS	Yes	
63.10(f)	Waiver of recordkeeping and reporting requirements	Yes	
63.11	Control device requirements for flares	No	The use of flares to meet the standards in subpart MM is not anticipated.
63.12	State authority and delegations	Yes	
63.13	Addresses of State air pollution control agencies and EPA Regional Offices	Yes	
63.14	Incorporations by reference	Yes	
63.15	Availability of information and confidentiality	Yes	

[66 FR 3193, Jan. 12, 2001, as amended at 66 FR 16408, Mar. 26, 2001]

Appendix F

40 CFR Part 60, Subpart BB—*Standards of Performance for Kraft Pulp Mills*

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart BB—Standards of Performance for Kraft Pulp Mills

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§60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in §60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction, reconstruction, or modification after September 24, 1976, and on or before May 23, 2013 is subject to the requirements of this subpart. Any facility under paragraph (a) of this section that commences construction, reconstruction, or modification after May 23, 2013 is subject to the requirements of subpart BBa of this part.

[51 FR 18544, May 20, 1986, as amended at 79 FR 18966, Apr. 4, 2014]

§60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in subpart A.

(a) *Kraft pulp mill* means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

(b) *Neutral sulfite semichemical pulping operation* means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) *Total reduced sulfur (TRS)* means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Method 16.

(d) *Digester system* means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), blow tank(s), chip steamer(s), and condenser(s).

(e) *Brown stock washer system* means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digester system. Diffusion washers are excluded from this definition.

(f) *Multiple-effect evaporator system* means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) *Black liquor oxidation system* means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) *Recovery furnace* means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) *Straight kraft recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.

(j) *Cross recovery furnace* means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.

(k) *Black liquor solids* means the dry weight of the solids which enter the recovery furnace in the black liquor.

(l) *Green liquor sulfidity* means the sulfidity of the liquor which leaves the smelt dissolving tank.

(m) *Smelt dissolving tank* means a vessel used for dissolving the smelt collected from the recovery furnace.

(n) *Lime kiln* means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(o) *Condensate stripper system* means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986; 65 FR 61758, Oct. 17, 2000]

§60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any recovery furnace any gases which:

(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.

(ii) Exhibit 35 percent opacity or greater.

(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].

(3) From any lime kiln any gases which contain particulate matter in excess of:

(i) 0.15 g/dscm (0.066 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.

(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978, as amended at 65 FR 61758, Oct. 17, 2000]

§60.283 Standard for total reduced sulfur (TRS).

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:

(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or

(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or

(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm by volume on a dry basis, uncorrected for oxygen content.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg air dried pulp (ADP) (0.01 lb/ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H_2S (0.033 lb/ton black liquor solids as H_2S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986; 65 FR 61758, Oct. 17, 2000]

§60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of §60.283(a)(1) (iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 25 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of §60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of §60.283(a)(1)(iii) or (iv) apply, perform the following:

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Using the following equation, correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentrations from a recovery furnace shall be corrected to 8 volume percent oxygen instead of 10 percent, and all 12-hour average TRS concentrations from a facility to which the provisions of §60.283(a)(1)(v) apply shall not be corrected for oxygen content:

$$C_{corr} = C_{meas} \times (21 - X)/(21 - Y)$$

where:

C_{corr} = the concentration corrected for oxygen.

C_{meas} = the concentration uncorrected for oxygen.

X = the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).

Y = the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under §60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume unless the provisions of §60.283(a)(1) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 650 °C (1200 °F), where the provisions of §60.283(a)(1)(iii) apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of §60.11(d) provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

(f) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems required under this section. All continuous monitoring systems shall be operated in accordance with the applicable procedures under Performance Specifications 1, 3, and 5 of appendix B of this part.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986; 65 FR 61759, Oct. 17, 2000; 71 FR 55127, Sept. 21, 2006; 79 FR 11250, Feb. 27, 2014]

§60.285 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.282(a) (1) and (3) as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to §60.284(c)(3).

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

(3) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) The owner or operator shall determine compliance with the particular matter standard in §60.282(a)(2) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = c_s \; Q_{sd} / BLS$$

where:

E = emission rate of particulate matter, g/kg (lb/ton) of BLS.

c_s = Concentration of particulate matter, g/dscm (lb/dscf).

Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

BLS = black liquor solids (dry weight) feed rate, kg/hr (ton/hr).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume shall be at least 60 minutes and 0.90 dscm (31.8 dscf). Water shall be used instead of acetone in the sample recovery.

(3) Process data shall be used to determine the black liquor solids (BLS) feed rate on a dry weight basis.

(d) The owner or operator shall determine compliance with the TRS standards in §60.283, except §60.283(a)(1)(vi) and (4), as follows:

(1) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in §60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours.

(2) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples.

(3) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see §60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made 3 times daily from the green liquor, and the daily average values shall be converted to sodium oxide ($Na_2 0$) and substituted into the following equation to determine the green liquor sulfidity:

$$GLS = 100\ C_{Na_2S} / \left(C_{Na_2S} C_{NaOH} C_{Na_2CO_3} \right)$$

Where:

GLS = green liquor sulfidity, percent.

C_{Na2S} = concentration of Na_2S as Na_2O, mg/liter (gr/gal).

C_{NaOH} = concentration of NaOH as Na_2O, mg/liter (gr/gal).

C_{Na2CO3} = concentration of Na_2CO_3 as Na_2O, mg/liter (gr/gal).

(e) The owner or operator shall determine compliance with the TRS standards in §60.283(a)(1)(vi) and (4) as follows:

(1) The emission rate (E) of TRS shall be computed for each run using the following equation:

$E=C_{TRS}\ F\ Q_{sd}/P$

where:

E=emission rate of TRS, g/kg (lb/ton) of BLS or ADP.

C_{TRS} = average combined concentration of TRS, ppm.

F = conversion factor, 0.001417 g H_2S/m3-ppm (8.846×10^{-8} lb H_2S/ft3-ppm).

Q_{sd} = volumetric flow rate of stack gas, dscm/hr (dscf/hr).

P=black liquor solids feed or pulp production rate, kg/hr (ton/hr).

(2) Method 16 shall be used to determine the TRS concentration (C_{TRS}).

(3) Method 2 shall be used to determine the volumetric flow rate (Q_{sd}) of the effluent gas.

(4) Process data shall be used to determine the black liquor feed rate or the pulp production rate (P).

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 5, Method 17 may be used if a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 204 °C (400 °F).

(2) In place of Method 16, Method 16A or 16B may be used.

[54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990; 65 FR 61759, Oct. 17, 2000]

Appendix G

40 CFR Part 63, Subpart JJJJ—*National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating*

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

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SOURCE: 67 FR 72341, Dec. 4, 2002, unless otherwise noted.

What This Subpart Covers

§63.3280 What is in this subpart?

This subpart describes the actions you must take to reduce emissions of organic hazardous air pollutants (HAP) from paper and other web coating operations. This subpart establishes emission standards for web coating lines and specifies what you must do to comply if you own or operate a facility with web coating lines that is a major source of HAP. Certain requirements apply to all who are subject to this subpart; others depend on the means you use to comply with an emission standard.

§63.3290 Does this subpart apply to me?

The provisions of this subpart apply to each new and existing facility that is a major source of HAP, as defined in §63.2, at which web coating lines are operated.

§63.3300 Which of my emission sources are affected by this subpart?

The affected source subject to this subpart is the collection of all web coating lines at your facility. This includes web coating lines engaged in the coating of metal webs that are used in flexible packaging, and web coating lines engaged in the coating of fabric substrates for use in pressure sensitive tape and abrasive materials. Web coating lines specified in paragraphs (a) through (g) of this section are not part of the affected source of this subpart.

(a) Any web coating line that is stand-alone equipment under subpart KK of this part (National Emission Standards for the Printing and Publishing Industry) which the owner or operator includes in the affected source under subpart KK.

(b) Any web coating line that is a product and packaging rotogravure or wide-web flexographic press under subpart KK of this part (national emission standards for the printing and publishing industry) which is included in the affected source under subpart KK.

(c) Web coating in lithography, screenprinting, letterpress, and narrow-web flexographic printing processes.

(d) Any web coating line subject to subpart EE of this part (national emission standards for magnetic tape manufacturing operations).

(e) Any web coating line that will be subject to the national emission standards for hazardous air pollutants (NESHAP) for surface coating of metal coil currently under development.

(f) Any web coating line that will be subject to the NESHAP for the printing, coating, and dyeing of fabric and other textiles currently under development. This would include any web coating line that coats both a paper or other web substrate and a fabric or other textile substrate, except for a fabric substrate used for pressure sensitive tape and abrasive materials.

(g) Any web coating line that is defined as research or laboratory equipment in §63.3310.

[67 FR 72341, Dec. 4, 2002, as amended at 71 FR 29805, May 24, 2006]

§63.3310 What definitions are used in this subpart?

All terms used in this subpart that are not defined in this section have the meaning given to them in the Clean Air Act (CAA) and in subpart A of this part.

Always-controlled work station means a work station associated with a dryer from which the exhaust is delivered to a control device with no provision for the dryer exhaust to bypass the control device unless there is an interlock to interrupt and prevent continued coating during a bypass. Sampling lines for analyzers, relief valves needed for safety purposes, and periodic cycling of exhaust dampers to ensure safe operation are not considered bypass lines.

Applied means, for the purposes of this subpart, the amount of organic HAP, coating material, or coating solids (as appropriate for the emission standards in §63.3320(b)) used by the affected source during the compliance period.

As-applied means the condition of a coating at the time of application to a substrate, including any added solvent.

As-purchased means the condition of a coating as delivered to the user.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that is delivered to a control device, expressed as a percentage.

Capture system means a hood, enclosed room, or other means of collecting organic HAP emissions into a closed-vent system that exhausts to a control device.

Car-seal means a seal that is placed on a device that is used to change the position of a valve or damper (*e.g.*, from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

Coating material(s) means all inks, varnishes, adhesives, primers, solvents, reducers, and other coating materials applied to a substrate via a web coating line. Materials used to form a substrate are not considered coating materials.

Control device means a device such as a solvent recovery device or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

Control device efficiency means the ratio of organic HAP emissions recovered or destroyed by a control device to the total organic HAP emissions that are introduced into the control device, expressed as a percentage.

Day means a 24-consecutive-hour period.

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 (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during start-up, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Existing affected source means any affected source the construction or reconstruction of which is commenced on or before September 13, 2000, and has not undergone reconstruction as defined in §63.2.

Fabric means any woven, knitted, plaited, braided, felted, or non-woven material made of filaments, fibers, or yarns including thread. This term includes material made of fiberglass, natural fibers, synthetic fibers, or composite materials.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Flexible packaging means any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, labels, liners and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

Formulation data means data on the organic HAP mass fraction, volatile matter mass fraction, or coating solids mass fraction of a material that is generated by the manufacturer or means other than a test method specified in this subpart or an approved alternative method.

HAP means hazardous air pollutants.

HAP applied means the organic HAP content of all coating materials applied to a substrate by a web coating line at an affected source.

Intermittently-controlled work station means a work station associated with a dryer with provisions for the dryer exhaust to be delivered to or diverted from a control device through a bypass line, depending on the position of a valve or damper. Sampling lines for analyzers, relief valves needed for safety purposes, and periodic cycling of exhaust dampers to ensure safe operation are not considered bypass lines.

Metal coil means a continuous metal strip that is at least 0.15 millimeter (0.006 inch) thick which is packaged in a roll or coil prior to coating. After coating, it may or may not be rewound into a roll or coil. Metal coil does not include metal webs that are coated for use in flexible packaging.

Month means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

Never-controlled work station means a work station that is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

New affected source means any affected source the construction or reconstruction of which is commenced after September 13, 2000.

Overall organic HAP control efficiency means the total efficiency of a capture and control system.

Pressure sensitive tape means a flexible backing material with a pressure-sensitive adhesive coating on one or both sides of the backing. Examples include, but are not limited to, duct/duct insulation tape and medical tape.

Research or laboratory equipment means any equipment for which the primary purpose is to conduct research and development into new processes and products where such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce except in a *de minimis* manner.

Rewind or cutting station means a unit from which substrate is collected at the outlet of a web coating line.

Uncontrolled coating line means a coating line consisting of only never-controlled work stations.

Unwind or feed station means a unit from which substrate is fed to a web coating line.

Web means a continuous substrate (*e.g.,* paper, film, foil) which is flexible enough to be wound or unwound as rolls.

Web coating line means any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.

Work station means a unit on a web coating line where coating material is deposited onto a web substrate.

Emission Standards and Compliance Dates

§63.3320 What emission standards must I meet?

(a) If you own or operate any affected source that is subject to the requirements of this subpart, you must comply with these requirements on and after the compliance dates as specified in §63.3330.

(b) You must limit organic HAP emissions to the level specified in paragraph (b)(1), (2), (3), or (4) of this section.

(1) No more than 5 percent of the organic HAP applied for each month (95 percent reduction) at existing affected sources, and no more than 2 percent of the organic HAP applied for each month (98 percent reduction) at new affected sources; or

(2) No more than 4 percent of the mass of coating materials applied for each month at existing affected sources, and no more than 1.6 percent of the mass of coating materials applied for each month at new affected sources; or

(3) No more than 20 percent of the mass of coating solids applied for each month at existing affected sources, and no more than 8 percent of the coating solids applied for each month at new affected sources.

(4) If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) by compound on a dry basis is achieved and the efficiency of the capture system is 100 percent.

(c) You must demonstrate compliance with this subpart by following the procedures in §63.3370.

§63.3321 What operating limits must I meet?

(a) For any web coating line or group of web coating lines for which you use add-on control devices, unless you use a solvent recovery system and conduct a liquid-liquid material balance, you must meet the operating limits specified in Table 1 to this subpart or according to paragraph (b) of this section. These operating limits apply to emission capture systems and control devices, and you must establish the operating limits during the performance test according to the requirements in §63.3360(e)(3). You must meet the operating limits at all times after you establish them.

(b) If you use an add-on control device other than those listed in Table 1 to this subpart or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under §63.8(f).

§63.3330 When must I comply?

(a) If you own or operate an existing affected source subject to the provisions of this subpart, you must comply by the compliance date. The compliance date for existing affected sources in this subpart is December 5, 2005. You must complete any performance test required in §63.3360 within the time limits specified in §63.7(a)(2).

(b) If you own or operate a new affected source subject to the provisions of this subpart, your compliance date is immediately upon start-up of the new affected source or by December 4, 2002, whichever is later. You must complete any performance test required in §63.3360 within the time limits specified in §63.7(a)(2).

(c) If you own or operate a reconstructed affected source subject to the provisions of this subpart, your compliance date is immediately upon startup of the affected source or by December 4, 2002, whichever is later. Existing affected sources which have undergone reconstruction as defined in §63.2 are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the existing affected source has been reconstructed. Additionally, the costs of retrofitting and replacing of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs. You must complete any performance test required in §63.3360 within the time limits specified in §63.7(a)(2).

General Requirements for Compliance With the Emission Standards and for Monitoring and Performance Tests

§63.3340 What general requirements must I meet to comply with the standards?

Table 2 to this subpart specifies the provisions of subpart A of this part that apply if you are subject to this subpart, such as startup, shutdown, and malfunction plans (SSMP) in §63.6(e)(3) for affected sources using a control device to comply with the emission standards.

§63.3350 If I use a control device to comply with the emission standards, what monitoring must I do?

(a) A summary of monitoring you must do follows:

If you operate a web coating line, and have the following:	Then you must:
(1) Intermittently-controlled work stations	Record parameters related to possible exhaust flow bypass of control device and to coating use (§63.3350(c)).
(2) Solvent recovery unit	Operate continuous emission monitoring system and perform quarterly audits or determine volatile matter recovered and conduct a liquid-liquid material balance (§63.3350(d)).
(3) Control Device	Operate continuous parameter monitoring system (§63.3350(e)).
(4) Capture system	Monitor capture system operating parameter (§63.3350(f)).

(b) Following the date on which the initial performance test of a control device is completed to demonstrate continuing compliance with the standards, you must monitor and inspect each capture system and each control device used to comply with §63.3320. You must install and operate the monitoring equipment as specified in paragraphs (c) and (f) of this section.

(c) *Bypass and coating use monitoring.* If you own or operate web coating lines with intermittently-controlled work stations, you must monitor bypasses of the control device and the mass of each coating material applied at the work station during any such bypass. If using a control device for complying with the requirements of this subpart, you must demonstrate that any coating material applied on a never-controlled work station or an intermittently-controlled work station operated in bypass mode is allowed in your compliance demonstration according to §63.3370(n) and (o). The bypass monitoring must be conducted using at least one of the procedures in paragraphs (c)(1) through (4) of this section for each work station and associated dryer.

(1) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour as well as every time the flow direction is changed. A flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(2) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line.

(3) *Valve closure continuous monitoring.* Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position when the emission source is in operation and is using a control device for compliance with the requirements of this subpart. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve position.

(4) *Automatic shutdown system.* Use an automatic shutdown system in which the web coating line is stopped when flow is diverted away from the control device to any bypass line when the control device is in operation. The automatic system must be inspected at least once every month to verify that it will detect diversions of flow and would shut down operations in the event of such a diversion.

(d) *Solvent recovery unit.* If you own or operate a solvent recovery unit to comply with §63.3320, you must meet the requirements in either paragraph (d)(1) or (2) of this section depending on how control efficiency is determined.

(1) *Continuous emission monitoring system (CEMS).* If you are demonstrating compliance with the emission standards in §63.3320 through continuous emission monitoring of a control device, you must install, calibrate, operate, and maintain the CEMS according to paragraphs (d)(1)(i) through (iii) of this section.

(i) Measure the total organic volatile matter mass flow rate at both the control device inlet and the outlet such that the reduction efficiency can be determined. Each continuous emission monitor must comply with performance specification 6, 8, or 9 of 40 CFR part 60, appendix B, as appropriate.

(ii) You must follow the quality assurance procedures in procedure 1, appendix F of 40 CFR part 60. In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, you must use compounds representative of the gaseous emission stream being controlled.

(iii) You must have valid data from at least 90 percent of the hours during which the process is operated.

(2) *Liquid-liquid material balance.* If you are demonstrating compliance with the emission standards in §63.3320 through liquid-liquid material balance, you must install, calibrate, maintain, and operate according to the manufacturer's specifications a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device must be certified by the manufacturer to be accurate to within ±2.0 percent by mass.

(e) *Continuous parameter monitoring system (CPMS).* If you are using a control device to comply with the emission standards in §63.3320, you must install, operate, and maintain each CPMS specified in paragraphs (e)(9) and (10) and (f) of this section according to the requirements in paragraphs (e)(1) through (8) of this section. You must install, operate, and maintain each CPMS specified in paragraph (c) of this section according to paragraphs (e)(5) through (7) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation to have a valid hour of data.

(2) You must have valid data from at least 90 percent of the hours during which the process operated.

(3) You must determine the hourly average of all recorded readings according to paragraphs (e)(3)(i) and (ii) of this section.

(i) To calculate a valid hourly value, you must have at least three of four equally spaced data values from that hour from a continuous monitoring system (CMS) that is not out-of-control.

(ii) Provided all of the readings recorded in accordance with paragraph (e)(3) of this section clearly demonstrate continuous compliance with the standard that applies to you, then you are not required to determine the hourly average of all recorded readings.

(4) You must determine the rolling 3-hour average of all recorded readings for each operating period. To calculate the average for each 3-hour averaging period, you must have at least two of three of the hourly averages for that period using only average values that are based on valid data (*i.e.,* not from out-of-control periods).

(5) You must record the results of each inspection, calibration, and validation check of the CPMS.

(6) At all times, you must maintain the monitoring system in proper working order including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(7) Except for monitoring malfunctions, associated repairs, or required quality assurance or control activities (including calibration checks or required zero and span adjustments), you must conduct all monitoring at all times that the unit is operating. Data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities shall not be used for purposes of calculating the emissions concentrations and percent reductions specified in §63.3370. You must use all the valid data collected during all other periods in assessing compliance of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(8) Any averaging period for which you do not have valid monitoring data and such data are required constitutes a deviation, and you must notify the Administrator in accordance with §63.3400(c).

(9) *Oxidizer.* If you are using an oxidizer to comply with the emission standards, you must comply with paragraphs (e)(9)(i) through (iii) of this section.

(i) Install, calibrate, maintain, and operate temperature monitoring equipment according to the manufacturer's specifications. The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months or the chart recorder, data logger, or temperature indicator must be replaced. You must replace the equipment whether you choose not to perform the calibration or the equipment cannot be calibrated properly.

(ii) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius, or ±1 °Celsius, whichever is greater. The thermocouple or temperature sensor must be installed in the combustion chamber at a location in the combustion zone.

(iii) For a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Celsius or ±1 degree Celsius, whichever is greater. The thermocouple or temperature sensor must be installed in the vent stream at the nearest feasible point to the inlet and outlet of the catalyst bed. Calculate the temperature rise across the catalyst.

(10) *Other types of control devices.* If you use a control device other than an oxidizer or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of an alternative monitoring method under §63.8(f).

(f) *Capture system monitoring*. If you are complying with the emission standards in §63.3320 through the use of a capture system and control device for one or more web coating lines, you must develop a site-specific monitoring plan containing the information specified in paragraphs (f)(1) and (2) of this section for these capture systems. You must monitor the capture system in accordance with paragraph (f)(3) of this section. You must make the monitoring plan available for inspection by the permitting authority upon request.

(1) The monitoring plan must:

(i) Identify the operating parameter to be monitored to ensure that the capture efficiency determined during the initial compliance test is maintained; and

(ii) Explain why this parameter is appropriate for demonstrating ongoing compliance; and

(iii) Identify the specific monitoring procedures.

(2) The monitoring plan must specify the operating parameter value or range of values that demonstrate compliance with the emission standards in §63.3320. The specified operating parameter value or range of values must represent the conditions present when the capture system is being properly operated and maintained.

(3) You must conduct all capture system monitoring in accordance with the plan.

(4) Any deviation from the operating parameter value or range of values which are monitored according to the plan will be considered a deviation from the operating limit.

(5) You must review and update the capture system monitoring plan at least annually.

§63.3360 What performance tests must I conduct?

(a) The performance test methods you must conduct are as follows:

If you control organic HAP on any individual web coating line or any group of web coating lines by:	You must:
(1) Limiting organic HAP or volatile matter content of coatings	Determine the organic HAP or volatile matter and coating solids content of coating materials according to procedures in §63.3360(c) and (d). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to §63.3360(g).
(2) Using a capture and	Conduct a performance test for each capture and control system to determine: the

control system	destruction or removal efficiency of each control device other than solvent recovery according to §63.3360(e), and the capture efficiency of each capture system according to §63.3360(f). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to §63.3360(g).

(b) If you are using a control device to comply with the emission standards in §63.3320, you are not required to conduct a performance test to demonstrate compliance if one or more of the criteria in paragraphs (b)(1) through (3) of this section are met.

(1) The control device is equipped with continuous emission monitors for determining inlet and outlet total organic volatile matter concentration and capture efficiency has been determined in accordance with the requirements of this subpart such that an overall organic HAP control efficiency can be calculated, and the continuous emission monitors are used to demonstrate continuous compliance in accordance with §63.3350; or

(2) You have met the requirements of §63.7(h) (for waiver of performance testing; or

(3) The control device is a solvent recovery system and you comply by means of a monthly liquid-liquid material balance.

(c) *Organic HAP content.* If you determine compliance with the emission standards in §63.3320 by means other than determining the overall organic HAP control efficiency of a control device, you must determine the organic HAP mass fraction of each coating material “as-purchased” by following one of the procedures in paragraphs (c)(1) through (3) of this section, and determine the organic HAP mass fraction of each coating material “as-applied” by following the procedures in paragraph (c)(4) of this section. If the organic HAP content values are not determined using the procedures in paragraphs (c)(1) through (3) of this section, the owner or operator must submit an alternative test method for determining their values for approval by the Administrator in accordance with §63.7(f). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(1) *Method 311.* You may test the coating material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the owner or operator. The organic HAP content must be calculated according to the criteria and procedures in paragraphs (c)(1)(i) through (iii) of this section.

(i) Include each organic HAP determined to be present at greater than or equal to 0.1 mass percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 mass percent for other organic HAP compounds.

(ii) Express the mass fraction of each organic HAP you include according to paragraph (c)(1)(i) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(iii) Calculate the total mass fraction of organic HAP in the tested material by summing the counted individual organic HAP mass fractions and truncating the result to three places after the decimal point (for example, 0.763).

(2) *Method 24.* For coatings, determine the volatile organic content as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to you.

(3) *Formulation data.* You may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the owner or operator by the manufacturer of the material. In the event of an inconsistency between Method 311 (appendix A of 40 CFR part 63) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for

OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used.

(4) *As-applied organic HAP mass fraction.* If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied organic HAP mass fraction is equal to the as-purchased organic HAP mass fraction. Otherwise, the as-applied organic HAP mass fraction must be calculated using Equation 1a of §63.3370.

(d) *Volatile organic and coating solids content.* If you determine compliance with the emission standards in §63.3320 by means other than determining the overall organic HAP control efficiency of a control device and you choose to use the volatile organic content as a surrogate for the organic HAP content of coatings, you must determine the as-purchased volatile organic content and coating solids content of each coating material applied by following the procedures in paragraph (d)(1) or (2) of this section, and the as-applied volatile organic content and coating solids content of each coating material by following the procedures in paragraph (d)(3) of this section.

(1) *Method 24.* You may determine the volatile organic and coating solids mass fraction of each coating applied using Method 24 (40 CFR part 60, appendix A.) The Method 24 determination may be performed by the manufacturer of the material and the results provided to you. If these values cannot be determined using Method 24, you must submit an alternative technique for determining their values for approval by the Administrator.

(2) *Formulation data.* You may determine the volatile organic content and coating solids content of a coating material based on formulation data and may rely on volatile organic content data provided by the manufacturer of the material. In the event of any inconsistency between the formulation data and the results of Method 24 of 40 CFR part 60, appendix A, and the Method 24 results are higher, the results of Method 24 will govern.

(3) *As-applied volatile organic content and coating solids content.* If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied volatile organic content is equal to the as-purchased volatile content and the as-applied coating solids content is equal to the as-purchased coating solids content. Otherwise, the as-applied volatile organic content must be calculated using Equation 1b of §63.3370 and the as-applied coating solids content must be calculated using Equation 2 of §63.3370.

(e) *Control device efficiency*. If you are using an add-on control device other than solvent recovery, such as an oxidizer, to comply with the emission standards in §63.3320, you must conduct a performance test to establish the destruction or removal efficiency of the control device according to the methods and procedures in paragraphs (e)(1) and (2) of this section. During the performance test, you must establish the operating limits required by §63.3321 according to paragraph (e)(3) of this section.

(1) An initial performance test to establish the destruction or removal efficiency of the control device must be conducted such that control device inlet and outlet testing is conducted simultaneously, and the data are reduced in accordance with the test methods and procedures in paragraphs (e)(1)(i) through (ix) of this section. You must conduct three test runs as specified in §63.7(e)(3), and each test run must last at least 1 hour.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, must be used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, must be used to determine gas volumetric flow rate.

(iii) Method 3, 3A, or 3B of 40 CFR part 60, appendix A, must be used for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10-1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],” (incorporated by reference, see §63.14).

(iv) Method 4 of 40 CFR part 60, appendix A, must be used to determine stack gas moisture.

(v) The gas volumetric flow rate, dry molecular weight, and stack gas moisture must be determined during each test run specified in paragraph (f)(1)(vii) of this section.

(vi) Method 25 or 25A of 40 CFR part 60, appendix A, must be used to determine total gaseous non-methane organic matter concentration. Use the same test method for both the inlet and outlet measurements which must be conducted simultaneously. You must submit notice of the intended test method to the Administrator for approval along with notification of the performance test required under §63.7(b). You must use Method 25A if any of the conditions described in paragraphs (e)(1)(vi)(A) through (D) of this section apply to the control device.

(A) The control device is not an oxidizer.

(B) The control device is an oxidizer but an exhaust gas volatile organic matter concentration of 50 ppmv or less is required to comply with the emission standards in §63.3320; or

(C) The control device is an oxidizer but the volatile organic matter concentration at the inlet to the control system and the required level of control are such that they result in exhaust gas volatile organic matter concentrations of 50 ppmv or less; or

(D) The control device is an oxidizer but because of the high efficiency of the control device the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.

(vii) Except as provided in §63.7(e)(3), each performance test must consist of three separate runs with each run conducted for at least 1 hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining volatile organic compound concentrations and mass flow rates, the average of the results of all the runs will apply.

(viii) Volatile organic matter mass flow rates must be determined for each run specified in paragraph (e)(1)(vii) of this section using Equation 1 of this section:

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}] \quad \text{Eq. 1}$$

Where:

M_f = Total organic volatile matter mass flow rate, kilograms (kg)/hour (h).

Q_{sd} = Volumetric flow rate of gases entering or exiting the control device, as determined according to §63.3360(e)(1)(ii), dry standard cubic meters (dscm)/h.

C_c = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(ix) For each run, emission control device destruction or removal efficiency must be determined using Equation 2 of this section:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \quad \text{Eq. 2}$$

Where:

E = Organic volatile matter control efficiency of the control device, percent.

M_{fi} = Organic volatile matter mass flow rate at the inlet to the control device, kg/h.

M_{fo} = Organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(x) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the test runs and calculated in Equation 2 of this section.

(2) You must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Operations during periods of startup, shutdown, and malfunction will not constitute representative conditions for the purpose of a performance test.

(3) *Operating limits.* If you are using one or more add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the emission standards in §63.3320, you must establish the applicable operating limits required by §63.3321. These operating limits apply to each add-on emission control device, and you must establish the operating limits during the performance test required by paragraph (e) of this section according to the requirements in paragraphs (e)(3)(i) and (ii) of this section.

(i) *Thermal oxidizer.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (e)(3)(i)(A) and (B) of this section.

(A) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(B) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(ii) *Catalytic oxidizer.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to paragraphs (e)(3)(ii)(A) and (B) or paragraphs (e)(3)(ii)(C) and (D) of this section.

(A) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(B) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(C) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (e)(3)(ii)(D) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(D) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (e)(3)(ii)(C) of this section. The plan must address, at a minimum, the elements specified in paragraphs (e)(3)(ii)(D)(*1*) through (*3*) of this section.

(*1*) Annual sampling and analysis of the catalyst activity (*i.e.,* conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures,

(*2*) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems, and

(*3*) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency in accordance with this section.

(f) *Capture efficiency*. If you demonstrate compliance by meeting the requirements of §63.3370(e), (f), (g), (h), (i)(2), (k), (n)(2) or (3), or (p), you must determine capture efficiency using the procedures in paragraph (f)(1), (2), or (3) of this section, as applicable.

(1) You may assume your capture efficiency equals 100 percent if your capture system is a permanent total enclosure (PTE). You must confirm that your capture system is a PTE by demonstrating that it meets the requirements of section 6 of EPA Method 204 of 40 CFR part 51, appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

(2) You may determine capture efficiency according to the protocols for testing with temporary total enclosures that are specified in Methods 204 and 204A through F of 40 CFR part 51, appendix M. You may exclude never-controlled work stations from such capture efficiency determinations.

(3) You may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective or the Lower Confidence Limit approach as described in appendix A of subpart KK of this part. You may exclude never-controlled work stations from such capture efficiency determinations.

(g) *Volatile matter retained in the coated web or otherwise not emitted to the atmosphere.* You may choose to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere when determining compliance with the emission standards in §63.3320. If you choose this option, you must develop a testing protocol to determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere and submit this protocol to the Administrator for approval. You must submit this protocol with your site-specific test plan under §63.7(f). If you intend to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere and demonstrate compliance according to §63.3370(c)(3), (c)(4), (c)(5), or (d), then the test protocol you submit must determine the mass of organic HAP retained in the coated web or otherwise not emitted to the atmosphere. Otherwise, compliance must be shown using the volatile organic matter content as a surrogate for the HAP content of the coatings.

(h) *Control devices in series.* If you use multiple control devices in series to comply with the emission standards in §63.3320, the performance test must include, at a minimum, the inlet to the first control device in the series, the outlet of the last control device in the series, and all intermediate streams (*e.g.,* gaseous exhaust to the atmosphere or a liquid stream from a recovery device) that are not subsequently treated by any of the control devices in the series.

Requirements for Showing Compliance

§63.3370 How do I demonstrate compliance with the emission standards?

(a) A summary of how you must demonstrate compliance follows:

If you choose to	Then you must demonstrate that:	To accomplish this:

demonstrate compliance by:		
(1) Use of "as-purchased" compliant coating materials	(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-purchased; or	Follow the procedures set out in §63.3370(b).
	(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-purchased	Follow the procedures set out in §63.3370(b).
(2) Use of "as-applied" compliant coating materials	(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied; or	Follow the procedures set out in §63.3370(c)(1). Use either Equation 1a or b of §63.3370 to determine compliance with §63.3320(b)(2) in accordance with §63.3370(c)(5)(i).
	(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied; or	Follow the procedures set out in §63.3370(c)(2). Use Equations 2 and 3 of §63.3370 to determine compliance with §63.3320(b)(3) in accordance with §63.3370(c)(5)(i).
	(iii) Monthly average of all coating materials used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and monthly average of all coating materials used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied on a monthly average basis; or	Follow the procedures set out in §63.3370(c)(3). Use Equation 4 of §63.3370 to determine compliance with §63.3320(b)(2) in accordance with §63.3370(c)(5)(ii).
	(iv) Monthly average of all coating materials used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and monthly average of all coating materials used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied on a monthly average basis	Follow the procedures set out in §63.3370(c)(4). Use Equation 5 of §63.3370 to determine compliance with §63.3320(b)(3) in accordance with §63.3370(c)(5)(ii).
(3) Tracking total monthly organic HAP applied	Total monthly organic HAP applied does not exceed the calculated limit based on emission limitations	Follow the procedures set out in §63.3370(d). Show that total monthly HAP applied (Equation 6 of §63.3370) is less than the calculated equivalent allowable organic HAP (Equation 13a or b of §63.3370).
(4) Use of a capture system and control device	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or oxidizer outlet organic HAP concentration is no greater	Follow the procedures set out in §63.3370(e) to determine compliance with §63.3320(b)(1) according to §63.3370(i) if using a solvent recovery device, or §63.3370(j) if using a control device and CPMS, or §63.3370(k) if using an

	than 20 ppmv by compound and capture efficiency is 100 percent; or operating parameters are continuously monitored; or	oxidizer.
	(ii) Overall organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis;	Follow the procedures set out in §63.3370(f) to determine compliance with §63.3320(b)(3) according to §63.3370(i) if using a solvent recovery device, or §63.3370(k) if using an oxidizer.
	(iii) Overall organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in §63.3370(g) to determine compliance with §63.3320(b)(2) according to §63.3370(i) if using a solvent recovery device, or §63.3370(k) if using an oxidizer.
	(iv) Overall organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in §63.3370(h). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or b of §63.3370). Calculate the monthly organic HAP emission rate according to §63.3370(i) if using a solvent recovery device, or §63.3370(k) if using an oxidizer.
(5) Use of multiple capture and/or control devices	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or	Follow the procedures set out in §63.3370(e) to determine compliance with §63.3320(b)(1) according to §63.3370(e)(1) or (2).
	(ii) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in §63.3370(f) to determine compliance with §63.3320(b)(3) according to §63.3370(n).
	(iii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in §63.3370(g) to determine compliance with §63.3320(b)(2) according to §63.3370(n).
	(iv) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in §63.3370(h). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or b of §63.3370) according to §63.3370(n).
(6) Use of a combination of compliant coatings and control devices	(i) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in §63.3370(f) to determine compliance with §63.3320(b)(3) according to §63.3370(n).
	(ii) Average equivalent organic HAP emission rate does not exceed 0.04 kg	Follow the procedures set out in §63.3370(g) to determine compliance with §63.3320(b)(2)

	organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	according to §63.3370(n).
	(iii) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in §63.3370(h). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or b of §63.3370) according to §63.3370(n).

(b) *As-purchased "compliant" coating materials.* (1) If you comply by using coating materials that individually meet the emission standards in §63.3320(b)(2) or (3), you must demonstrate that each coating material applied during the month at an existing affected source contains no more than 0.04 mass fraction organic HAP or 0.2 kg organic HAP per kg coating solids, and that each coating material applied during the month at a new affected source contains no more than 0.016 mass fraction organic HAP or 0.08 kg organic HAP per kg coating solids on an as-purchased basis as determined in accordance with §63.3360(c).

(2) You are in compliance with emission standards in §63.3320(b)(2) and (3) if each coating material applied at an existing affected source is applied as-purchased and contains no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and each coating material applied at a new affected source is applied as-purchased and contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(c) *As-applied "compliant" coating materials.* If you comply by using coating materials that meet the emission standards in §63.3320(b)(2) or (3) as-applied, you must demonstrate compliance by following one of the procedures in paragraphs (c)(1) through (4) of this section. Compliance is determined in accordance with paragraph (c)(5) of this section.

(1) *Each coating material as-applied meets the mass fraction of coating material standard (§63.3320(b)(2)).* You must demonstrate that each coating material applied at an existing affected source during the month contains no more than 0.04 kg organic HAP per kg coating material applied, and each coating material applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material applied as determined in accordance with paragraphs (c)(1)(i) and (ii) of this section. You must calculate the as-applied organic HAP content of as-purchased coating materials which are reduced, thinned, or diluted prior to application.

(i) Determine the organic HAP content or volatile organic content of each coating material applied on an as-purchased basis in accordance with §63.3360(c).

(ii) Calculate the as-applied organic HAP content of each coating material using Equation 1a of this section:

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 1a}$$

Where:

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

or calculate the as-applied volatile organic content of each coating material using Equation 1b of this section:

$$C_{avi} = \frac{\left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 1b}$$

Where:

C_{avi} = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(2) *Each coating material as-applied meets the mass fraction of coating solids standard (§63.3320(b)(3)).* You must demonstrate that each coating material applied at an existing affected source contains no more than 0.20 kg of organic HAP per kg of coating solids applied and each coating material applied at a new affected source contains no more than 0.08 kg of organic HAP per kg of coating solids applied. You must demonstrate compliance in accordance with paragraphs (c)(2)(i) and (ii) of this section.

(i) Determine the as-applied coating solids content of each coating material following the procedure in §63.3360(d). You must calculate the as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 2 of this section:

$$C_{asi} = \frac{\left(C_{si}M_i + \sum_{j=1}^{q} C_{sij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 2}$$

Where:

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ii) Calculate the as-applied organic HAP to coating solids ratio using Equation 3 of this section:

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad \text{Eq. 3}$$

Where:

H_{si} = As-applied, organic HAP to coating solids ratio of coating material, i.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{asi} = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

(3) *Monthly average organic HAP content of all coating materials as-applied is less than the mass percent limit (§63.3320(b)(2)).* Demonstrate that the monthly average as-applied organic HAP content of all coating materials applied at an existing affected source is less than 0.04 kg organic HAP per kg of coating material applied, and all coating materials applied at a new affected source are less than 0.016 kg organic HAP per kg of coating material applied, as determined by Equation 4 of this section:

$$H_L = \frac{\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 4}$$

Where:

H_L = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

(4) *Monthly average organic HAP content of all coating materials as-applied is less than the mass fraction of coating solids limit (§63.3320(b)(3)).* Demonstrate that the monthly average as-applied organic HAP content on the basis of coating solids applied of all coating materials applied at an existing affected source is less than 0.20 kg organic HAP per kg coating solids applied, and all coating materials applied at a new affected source are less than 0.08 kg organic HAP per kg coating solids applied, as determined by Equation 5 of this section:

$$H_S = \frac{\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^{p} C_{Si}M_i + \sum_{j=1}^{q} C_{Sij}M_{ij}} \qquad \text{Eq. 5}$$

Where:

H_s = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg coating solids applied.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

(5) The affected source is in compliance with emission standards in §63.3320(b)(2) or (3) if:

(i) The organic HAP content of each coating material as-applied at an existing affected source is no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the organic HAP content of each coating material as-applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids; or

(ii) The monthly average organic HAP content of all as-applied coating materials at an existing affected source are no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the monthly average organic HAP content of all as-applied coating materials at a new affected source is no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(d) *Monthly allowable organic HAP applied.* Demonstrate that the total monthly organic HAP applied as determined by Equation 6 of this section is less than the calculated equivalent allowable organic HAP as determined by Equation 13a or b in paragraph (l) of this section:

$$H_m = \sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret} \qquad \text{Eq. 6}$$

Where:

H_m = Total monthly organic HAP applied, kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

(e) *Capture and control to reduce emissions to no more than allowable limit (§63.3320(b)(1)).* Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent at an existing affected source and at least 98 percent at a new affected source for each month, or operate a capture system and oxidizer so that an outlet organic HAP concentration of no greater than 20 ppmv by compound on a dry basis is achieved as long as the capture efficiency is 100 percent as detailed in §63.3320(b)(4). Unless one of the cases described in paragraph (e)(1), (2), or (3) of this section applies to the affected source, you must either demonstrate compliance in accordance with the procedure in paragraph (i) of this section when emissions from the affected source are controlled by a solvent recovery device, or the procedure in paragraph (k) of this section when emissions are controlled by an oxidizer or demonstrate compliance for a web coating line by operating each capture system and each control device and continuous parameter monitoring according to the procedures in paragraph (j) of this section.

(1) If the affected source has only always-controlled work stations and operates more than one capture system or more than one control device, you must demonstrate compliance in accordance with the provisions of either paragraph (n) or (p) of this section.

(2) If the affected source operates one or more never-controlled work stations or one or more intermittently-controlled work stations, you must demonstrate compliance in accordance with the provisions of paragraph (n) of this section.

(3) An alternative method of demonstrating compliance with §63.3320(b)(1) is the installation of a PTE around the web coating line that achieves 100 percent capture efficiency and ventilation of all organic HAP emissions from the total enclosure to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv by compound on a dry basis. If this method is selected, you must demonstrate compliance by following the procedures in paragraphs (e)(3)(i) and (ii) of this section. Compliance is determined according to paragraph (e)(3)(iii) of this section.

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in §63.3360(f)(1) will be considered a total enclosure.

(ii) Determine the organic HAP concentration at the outlet of your total enclosure using the procedures in paragraph (e)(3)(ii)(A) or (B) of this section.

(A) Determine the control device efficiency using Equation 2 of §63.3360 and the applicable test methods and procedures specified in §63.3360(e).

(B) Use a CEMS to determine the organic HAP emission rate according to paragraphs (i)(2)(i) through (x) of this section.

(iii) You are in compliance if the installation of a total enclosure is demonstrated and the organic HAP concentration at the outlet of the incinerator is demonstrated to be no greater than 20 ppmv by compound on a dry basis.

(f) *Capture and control to achieve mass fraction of coating solids applied limit (§63.3320(b)(3)).* Operate a capture system and control device and limit the organic HAP emission rate from an existing affected source to no more than 0.20 kg organic HAP emitted per kg coating solids applied, and from a new affected source to no more than 0.08 kg organic HAP emitted per kg coating solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (n) of this section. Otherwise, you must demonstrate compliance following the procedure in paragraph (i) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (k) of this section when emissions are controlled by an oxidizer.

(g) *Capture and control to achieve mass fraction limit (§63.3320(b)(2)).* Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg coating material applied at an existing affected source, and no more than 0.016 kg organic HAP emitted per kg coating material applied at a new affected source as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (n) of this section. Otherwise, you must demonstrate compliance following the procedure in paragraph (i) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (k) of this section when emissions are controlled by an oxidizer.

(h) *Capture and control to achieve allowable emission rate.* Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with paragraph (l) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (n) of this section. Otherwise, the owner or operator must demonstrate compliance following the procedure in paragraph (i) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (k) of this section when emissions are controlled by an oxidizer.

(i) *Solvent recovery device compliance demonstration.* If you use a solvent recovery device to control emissions, you must show compliance by following the procedures in either paragraph (i)(1) or (2) of this section:

(1) *Liquid-liquid material balance.* Perform a monthly liquid-liquid material balance as specified in paragraphs (i)(1)(i) through (v) of this section and use the applicable equations in paragraphs (i)(1)(vi) through (ix) of this section to convert the data to units of the selected compliance option in paragraphs (e) through (h) of this section. Compliance is determined in accordance with paragraph (i)(1)(x) of this section.

(i) Determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in §63.3360(c).

(iii) Determine the volatile organic content of each coating material as-applied during the month following the procedure in §63.3360(d).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in §63.3360(d).

(v) Determine and monitor the amount of volatile organic matter recovered for the month according to the procedures in §63.3350(d).

(vi) *Recovery efficiency.* Calculate the volatile organic matter collection and recovery efficiency using Equation 7 of this section:

$$R_v = \frac{M_{vr} + M_{vret}}{\sum_{i-1}^{p} C_{vi} M_i + \sum_{i-1}^{q} C_{vij} M_{ij}} \times 100 \quad \text{Eq. 7}$$

Where:

R_v = Organic volatile matter collection and recovery efficiency, percent.

M_{vr} = Mass of volatile matter recovered in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

p = Number of different coating materials applied in a month.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(vii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 8 of this section:

$$H_e = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}\right] \qquad \text{Eq. 8}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

R_v = Organic volatile matter collection and recovery efficiency, percent.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

(viii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 9 of this section:

$$L = \frac{H_e}{\sum_{i=1}^{p} C_{si} M_i + \sum_{j=1}^{q} C_{sij} M_{ij}} \qquad \text{Eq. 9}$$

Where:

L = Mass organic HAP emitted per mass of coating solids applied, kg/kg.

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ix) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 of this section:

$$S = \frac{H_e}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 10}$$

Where:

S = Mass organic HAP emitted per mass of material applied, kg/kg.

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(x) You are in compliance with the emission standards in §63.3320(b) if:

(A) The volatile organic matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (l) of this section.

(2) *Continuous emission monitoring of capture system and control device performance.* Demonstrate initial compliance through a performance test on capture efficiency and continuing compliance through continuous emission monitors and continuous monitoring of capture system operating parameters following the procedures in paragraphs (i)(2)(i) through (vii) of this section. Use the applicable equations specified in paragraphs (i)(2)(viii) through (x) of this section to convert the monitoring and other data into units of the selected compliance option in paragraphs (e) through (h) of this section. Compliance is determined in accordance with paragraph (i)(2)(xi) of this section.

(i) *Control device efficiency.* Continuously monitor the gas stream entering and exiting the control device to determine the total organic volatile matter mass flow rate (*e.g.,* by determining the concentration of the vent gas in grams per cubic meter and the volumetric flow rate in cubic meters per second such that the total organic volatile matter mass flow rate in grams per second can be calculated) such that the control device efficiency of the control device can be calculated for each month using Equation 2 of §63.3360.

(ii) *Capture efficiency monitoring.* Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with §63.3350(f) to ensure capture efficiency.

(iii) Determine the percent capture efficiency in accordance with §63.3360(f).

(iv) *Control efficiency.* Calculate the overall organic HAP control efficiency achieved for each month using Equation 11 of this section:

$$R = \frac{(E)(CE)}{100} \qquad \text{Eq. 11}$$

Where:

R = Overall organic HAP control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common control device during the month.

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic

HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in §63.3360(c).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material as-applied during the month following the procedure in §63.3360(d).

(viii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month for each month using Equation 12 of this section:

$$H_e = (1-R)\left(\sum_{i=1}^{p} C_{ahi} M_i\right) - M_{vret} \quad \text{Eq. 12}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

R = Overall organic HAP control efficiency, percent.

p = Number of different coating materials applied in a month.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(ix) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 9 of this section.

(x) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 of this section.

(xi) *Compare actual performance to the performance required by compliance option.* The affected source is in compliance with the emission standards in §63.3320(b) for each month if the capture system is operated such that the average capture system operating parameter is greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3350(f); and

(A) The organic volatile matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (l) of this section.

(j) *Capture and control system compliance demonstration procedures using a CPMS.* If you use an add-on control device, you must demonstrate initial compliance for each capture system and each control device through performance tests and demonstrate continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in paragraphs (j)(1) through (3) of this section. Compliance is determined in accordance with paragraph (j)(4) of this section.

(1) Determine the control device destruction or removal efficiency using the applicable test methods and procedures in §63.3360(e).

(2) Determine the emission capture efficiency in accordance with §63.3360(f).

(3) Whenever a web coating line is operated, continuously monitor the operating parameters established according to §63.3350(e) and (f).

(4) You are in compliance with the emission standards in §63.3320(b) if the control device is operated such that the average operating parameter value is greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3360(e) for each 3-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3350(f); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (l) of this section.

(k) *Oxidizer compliance demonstration procedures.* If you use an oxidizer to control emissions, you must show compliance by following the procedures in paragraph (k)(1) of this section. Use the applicable equations specified in paragraph (k)(2) of this section to convert the monitoring and other data into units of the selected compliance option in paragraph (e) through (h) of this section. Compliance is determined in accordance with paragraph (k)(3) of this section.

(1) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in paragraphs (k)(1)(i) through (vi) of this section:

(i) Determine the oxidizer destruction efficiency using the procedure in §63.3360(e).

(ii) Determine the capture system capture efficiency in accordance with §63.3360(f).

(iii) *Capture and control efficiency monitoring.* Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with §63.3350(e) and (f) to ensure capture and control efficiency.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common oxidizer during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in §63.3360(c).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in §63.3360(d).

(2) Convert the information obtained under paragraph (p)(1) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (k)(2)(i) through (iv) of this section.

(i) *Control efficiency.* Calculate the overall organic HAP control efficiency achieved using Equation 11 of this section.

(ii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 12 of this section.

(iii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 9 of this section.

(iv) *Organic HAP based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 of this section.

(3) You are in compliance with the emission standards in §63.3320(b) if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.3360(e) for each 3-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3350(f); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (l) of this section.

(l) *Monthly allowable organic HAP emissions.* This paragraph provides the procedures and calculations for determining monthly allowable organic HAP emissions for use in demonstrating compliance in accordance with paragraph (d), (h), (i)(1)(x)(D), (i)(2)(xi)(D), or (k)(3)(iv) of this section. You will need to determine the amount of coating material applied at greater than or equal to 20 mass percent coating solids and the amount of coating material applied at less than 20 mass percent coating solids. The allowable organic HAP limit is then calculated based on coating material applied at greater than or equal to 20 mass percent coating solids complying with 0.2 kg organic HAP per kg coating solids at an existing affected source or 0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows:

(1) Determine the as-purchased mass of each coating material applied each month.

(2) Determine the as-purchased coating solids content of each coating material applied each month in accordance with §63.3360(d)(1).

(3) Determine the as-purchased mass fraction of each coating material which was applied at 20 mass percent or greater coating solids content on an as-applied basis.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to coating materials which were applied at less than 20 mass percent coating solids content on an as-applied basis each month.

(5) Calculate the monthly allowable organic HAP emissions using Equation 13a of this section for an existing affected source:

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Eq. 13a}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = mass of as-purchased coating material, i, applied in a month, kg.

G_i = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

q = Number of different materials added to the coating material.

M_{Lj} = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

or Equation 13b of this section for a new affected source:

$$H_a = 0.08\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.016\left[\sum_{i=1}^{p} M_i\left(1-G_i\right) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Eq. 13b}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

G_i = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

q = Number of different materials added to the coating material.

M_{Lj} = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

(m) [Reserved]

(n) *Combinations of capture and control.* If you operate more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, you must calculate organic HAP emissions according to the procedures in paragraphs (n)(1) through (4) of this section, and use the calculation procedures specified in paragraph (n)(5) of this section to convert the monitoring and other data into units of the selected control option in paragraphs (e) through (h) of this section. Use the procedures specified in paragraph (n)(6) of this section to demonstrate compliance.

(1) *Solvent recovery system using liquid-liquid material balance compliance demonstration.* If you choose to comply by means of a liquid-liquid material balance for each solvent recovery system used to control one or more web coating lines, you must determine the organic HAP emissions for those web coating lines controlled by that solvent recovery system either:

(i) In accordance with paragraphs (i)(1)(i) through (iii) and (v) through (vii) of this section, if the web coating lines controlled by that solvent recovery system have only always-controlled work stations; or

(ii) In accordance with paragraphs (i)(1)(ii), (iii), (v), and (vi) and (o) of this section, if the web coating lines controlled by that solvent recovery system have one or more never-controlled or intermittently-controlled work stations.

(2) *Solvent recovery system using performance test compliance demonstration and CEMS.* To demonstrate compliance through an initial test of capture efficiency, continuous monitoring of a capture system operating parameter, and a CEMS on each solvent recovery system used to control one or more web coating lines, you must:

(i) For each capture system delivering emissions to that solvent recovery system, monitor the operating parameter established in accordance with §63.3350(f) to ensure capture system efficiency; and

(ii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that solvent recovery system either:

(A) In accordance with paragraphs (i)(2)(i) through (iii), (v), (vi), and (viii) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with paragraphs (i)(2)(i) through (iii), (vi), and (o) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(3) *Oxidizer.* To demonstrate compliance through performance tests of capture efficiency and control device efficiency, continuous monitoring of capture system, and CPMS for control device operating parameters for each oxidizer used to control emissions from one or more web coating lines, you must:

(i) Monitor the operating parameter in accordance with §63.3350(e) to ensure control device efficiency; and

(ii) For each capture system delivering emissions to that oxidizer, monitor the operating parameter established in accordance with §63.3350(f) to ensure capture efficiency; and

(iii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that oxidizer either:

(A) In accordance with paragraphs (k)(1)(i) through (vi) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with paragraphs (k)(1)(i) through (iii), (v), and (o) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(4) *Uncontrolled coating lines.* If you own or operate one or more uncontrolled web coating lines, you must determine the organic HAP applied on those web coating lines using Equation 6 of this section. The organic HAP emitted from an uncontrolled web coating line is equal to the organic HAP applied on that web coating line.

(5) Convert the information obtained under paragraphs (n)(1) through (4) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (n)(5)(i) through (iv) of this section.

(i) *Organic HAP emitted.* Calculate the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to paragraphs (n)(1), (2)(ii), (3)(iii), and (4) of this section.

(ii) *Coating solids applied.* If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, the owner or operator must determine the coating solids content of each coating material applied during the month following the procedure in §63.3360(d).

(iii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 9 of this section.

(iv) *Organic HAP based on materials applied.* Calculate the organic HAP emission rate based on material applied using Equation 10 of this section.

(6) *Compliance.* The affected source is in compliance with the emission standards in §63.3320(b) for the month if all operating parameters required to be monitored under paragraphs (n)(1) through (3) of this section were maintained at the values established under §§63.3350 and 63.3360; and

(i) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source during the month is less than the calculated allowable organic HAP as determined using paragraph (l) of this section; or

(iv) The total mass of organic HAP emitted by the affected source was not more than 5 percent of the total mass of organic HAP applied for the month at an existing affected source and no more than 2 percent of the total mass of organic HAP applied for the month at a new affected source. The total mass of organic HAP applied by the affected source in the month must be determined using Equation 6 of this section.

(o) *Intermittently-controlled and never-controlled work stations.* If you have been expressly referenced to this paragraph by paragraphs (n)(1)(ii), (n)(2)(ii)(B), or (n)(3)(iii)(B) of this section for calculation procedures to determine organic HAP emissions for your intermittently-controlled and never-controlled work stations, you must:

(1) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in bypass mode and the mass of all coating materials as-applied on never-controlled work stations during the month.

(2) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in a controlled mode and the mass of all coating materials applied on always-controlled work stations during the month.

(3) *Liquid-liquid material balance compliance demonstration.* For each web coating line or group of web coating lines for which you use the provisions of paragraph (n)(1)(ii) of this section, you must calculate the organic HAP emitted during the month using Equation 14 of this section:

$$H_e = \left[\sum_{i=1}^{p} M_{Ci} C_{ahi}\right]\left[1 - \frac{R_v}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret} \qquad \text{Eq. 14}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_{ci} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i, as-applied on always-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

R_v = Organic volatile matter collection and recovery efficiency, percent.

M_{Bi} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i, as-applied on never-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(4) *Performance test to determine capture efficiency and control device efficiency*. For each web coating line or group of web coating lines for which you use the provisions of paragraph (n)(2)(ii)(B) or (n)(3)(iii)(B) of this section, you must calculate the organic HAP emitted during the month using Equation 15 of this section:

$$H_e = \left[\sum_{i=1}^{p} M_{Ci} C_{ahi}\right]\left[1 - \frac{R}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret} \qquad \text{Eq. 15}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_{ci} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i, as-applied on always-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

R = Overall organic HAP control efficiency, percent.

M_{Bi} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i, as-applied on never-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(p) *Always-controlled work stations with more than one capture and control system.* If you operate more than one capture system or more than one control device and only have always-controlled work stations, then you are in compliance with the emission standards in §63.3320(b)(1) for the month if for each web coating line or group of web coating lines controlled by a common control device:

(1) The volatile matter collection and recovery efficiency as determined by paragraphs (i)(1)(i), (iii), (v), and (vi) of this section is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(2) The overall organic HAP control efficiency as determined by paragraphs (i)(2)(i) through (iv) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(3) The overall organic HAP control efficiency as determined by paragraphs (k)(1)(i) through (iii) and (k)(2)(i) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source.

Notifications, Reports, and Records

§63.3400 What notifications and reports must I submit?

(a) Each owner or operator of an affected source subject to this subpart must submit the reports specified in paragraphs (b) through (g) of this section to the Administrator:

(b) You must submit an initial notification as required by §63.9(b).

(1) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in §63.3330(a).

(2) Initial notification for new and reconstructed affected sources must be submitted as required by §63.9(b).

(3) For the purpose of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b) and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA to implement and enforce this subpart.

(4) If you are using a permit application in lieu of an initial notification in accordance with paragraph (b)(3) of this section, the permit application must be submitted by the same due date specified for the initial notification.

(c) You must submit a semiannual compliance report according to paragraphs (c)(1) and (2) of this section.

(1) Compliance report dates.

(i) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.3330 and ending on June 30 or December 31, whichever date is the first date following the end of the calendar half immediately following the compliance date that is specified for your affected source in §63.3330.

(ii) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the calendar half immediately following the compliance date that is specified for your affected source in §63.3330.

(iii) 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.

(iv) 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.

(v) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and the permitting authority has established dates for submitting semiannual reports pursuant to §70.6(a)(3)(iii)(A) or §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 (c)(1)(i) through (iv) of this section.

(2) The compliance report must contain the information in paragraphs (c)(2)(i) through (vi) of this section:

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

(v) For each deviation from an emission limitation (emission limit or operating limit) that applies to you and that occurs at an affected source where you are not using a CEMS to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (c)(2)(i) through (iii) of this section, and:

(A) The total operating time of each affected source during the reporting period.

(B) Information on the number, duration, and cause of deviations (including unknown cause), if applicable, and the corrective action taken.

(C) Information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other calibration checks.

(vi) For each deviation from an emission limit occurring at an affected source where you are using a CEMS to comply with the emission limit in this subpart, you must include the information in paragraphs (c)(2)(i) through (iii) and (vi)(A) through (J) of this section.

(A) The date and time that each malfunction started and stopped.

(B) The date and time that each CEMS and CPMS, if applicable, was inoperative except for zero (low-level) and high-level checks.

(C) The date and time that each CEMS and CPMS, if applicable, was out-of-control, including the information in §63.8(c)(8).

(D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(E) A summary of the total duration (in hours) of each deviation during the reporting period and the total duration of each deviation as a percent of the total source operating time during that reporting period.

(F) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(G) A summary of the total duration (in hours) of CEMS and CPMS downtime during the reporting period and the total duration of CEMS and CPMS downtime as a percent of the total source operating time during that reporting period.

(H) A breakdown of the total duration of CEMS and CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

(I) The date of the latest CEMS and CPMS certification or audit.

(J) A description of any changes in CEMS, CPMS, or controls since the last reporting period.

(d) You must submit a Notification of Performance Tests as specified in §§63.7 and 63.9(e) if you are complying with the emission standard using a control device and you are required to conduct a performance test of the control device. This notification and the site-specific test plan required under §63.7(c)(2) must identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the control device determined during the performance test are maintained. Unless EPA objects to the parameter or requests changes, you may consider the parameter approved.

(e) You must submit a Notification of Compliance Status as specified in §63.9(h).

(f) You must submit performance test reports as specified in §63.10(d)(2) if you are using a control device to comply with the emission standard and you have not obtained a waiver from the performance test requirement or you are not exempted from this requirement by §63.3360(b). The performance test reports must be submitted as part of the notification of compliance status required in §63.3400(e).

(g) You must submit startup, shutdown, and malfunction reports as specified in §63.10(d)(5), except that the provisions in subpart A of this part pertaining to startups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this subpart.

(1) If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not consistent with the procedures specified in the affected source's SSMP required by §63.6(e)(3), the owner or operator must state such information in the report. The startup, shutdown, or malfunction report must consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy and must be submitted to the Administrator.

(2) Separate startup, shutdown, and malfunction reports are not required if the information is included in the report specified in paragraph (c)(2)(vi) of this section.

§63.3410 What records must I keep?

(a) Each owner or operator of an affected source subject to this subpart must maintain the records specified in paragraphs (a)(1) and (2) of this section on a monthly basis in accordance with the requirements of §63.10(b)(1):

(1) Records specified in §63.10(b)(2) of all measurements needed to demonstrate compliance with this standard, including:

(i) Continuous emission monitor data in accordance with the requirements of §63.3350(d);

(ii) Control device and capture system operating parameter data in accordance with the requirements of §63.3350(c), (e), and (f);

(iii) Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of §63.3360(c);

(iv) Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of §63.3360(d);

(v) Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of §63.3360(e) and (f); and

(vi) Material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of §63.3370(b), (c), and (d).

(2) Records specified in §63.10(c) for each CMS operated by the owner or operator in accordance with the requirements of §63.3350(b).

(b) Each owner or operator of an affected source subject to this subpart must maintain records of all liquid-liquid material balances performed in accordance with the requirements of §63.3370. The records must be maintained in accordance with the requirements of §63.10(b).

Delegation of Authority

§63.3420 What authorities may be delegated to the States?

(a) In delegating implementation and enforcement authority to a State under 40 CFR part 63, subpart E, the authorities contained in paragraph (b) of this section must be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States: §63.3360(c), approval of alternate test method for organic HAP content determination; §63.3360(d), approval of alternate test method for volatile matter determination.

Table 1 to Subpart JJJJ of Part 63—Operating Limits if Using Add-On Control Devices and Capture System

If you are required to comply with operating limits by §63.3321, you must comply with the applicable operating limits in the following table:

For the following device:	You must meet the following operating limit:	And you must demonstrate continuous compliance with operating limits by:
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.3360(e)(3)(i)	i. Collecting the combustion temperature data according to §63.3350(e)(9); ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature at the inlet to the catalyst bed in any 3-hour period must not fall below the combustion temperature limit established according to §63.3360(e)(3)(ii)	i. Collecting the catalyst bed inlet temperature data according to §63.3350(e)(9); ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average catalyst bed inlet temperature at or above the temperature limit.
	b. The temperature rise across the catalyst bed must not fall below the limit established according to §63.3360(e)(3)(ii)	i. Collecting the catalyst bed inlet and outlet temperature data according to §63.3350(e)(9); ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average temperature rise across the catalyst bed at or above the limit.
3. Emission capture system	Submit monitoring plan to the Administrator that identifies operating parameters to be monitored according to §63.3350(f)	Conduct monitoring according to the plan (§63.3350(f)(3)).

Table 2 to Subpart JJJJ of Part 63—Applicability of 40 CFR Part 63 General Provisions to Subpart JJJJ

You must comply with the applicable General Provisions requirements according to the following table:

General provisions reference	Applicable to subpart JJJJ	Explanation
§63.1(a)(1)-(4)	Yes.	
§63.1(a)(5)	No	Reserved.
§63.1(a)(6)-(8)	Yes.	
§63.1(a)(9)	No	Reserved.
§63.1(a)(10)-(14)	Yes.	
§63.1(b)(1)	No	Subpart JJJJ specifies applicability.
§63.1(b)(2)-(3)	Yes.	
§63.1(c)(1)	Yes.	
§63.1(c)(2)	No	Area sources are not subject to emission standards of subpart JJJJ.
§63.1(c)(3)	No	Reserved.
§63.1(c)(4)	Yes.	
§63.1(c)(5)	Yes.	
§63.1(d)	No	Reserved.
§63.1(e)	Yes.	
§63.1(e)(4)	No.	
§63.2	Yes	Additional definitions in subpart JJJJ.
§63.3(a)-(c)	Yes.	
§63.4(a)(1)-(3)	Yes.	
§63.4(a)(4)	No	Reserved.
§63.4(a)(5)	Yes.	
§63.4(b)-(c)	Yes.	
§63.5(a)(1)-(2)	Yes.	
§63.5(b)(1)	Yes.	
§63.5(b)(2)	No	Reserved.
§63.5(b)(3)-(6)	Yes.	
§63.5(c)	No	Reserved.
§63.5(d)	Yes.	
§63.5(e)	Yes.	
§63.5(f)	Yes.	
§63.6(a)	Yes	Applies only when capture and control system is used to comply with the standard.
§63.6(b)(1)-(5)	No	
§63.6(b)(6)	No	Reserved.
§63.6(b)(7)	Yes.	
§63.6(c)(1)-(2)	Yes.	
§63.6(c)(3)-(4)	No	Reserved.
§63.6(c)(5)	Yes.	
§63.6(d)	No	Reserved.
§63.6(e)	Yes	Provisions pertaining to SSMP, and CMS do not apply unless an add-on

		control system is used to comply with the emission limitations.
§63.6(f)	Yes.	
§63.6(g)	Yes.	
§63.6(h)	No	Subpart JJJJ does not require continuous opacity monitoring systems (COMS).
§63.6(i)(1)-(14)	Yes.	
§63.6(i)(15)	No	Reserved.
§63.6(i)(16)	Yes.	
§63.6(j)	Yes.	
§63.7	Yes.	
§63.8(a)(1)-(2)	Yes.	
§63.8(a)(3)	No	Reserved.
§63.8(a)(4)	No.	
§63.8(b)	Yes.	
§63.8(c)(1)-(3)	Yes	§63.8(c)(1)(i) & (ii) only apply if you use capture and control systems and are required to have a start-up, shutdown, and malfunction plan.
§63.8(c)(4)	Yes.	
§63.8(c)(5)	No	Subpart JJJJ does not require COMS.
§63.8(c)(6)-(c)(8)	Yes	Provisions for COMS are not applicable.
§63.8(d)-(f)	Yes	§63.8(f)(6) only applies if you use CEMS.
§63.8(g)	Yes	Only applies if you use CEMS.
§63.9(a)	Yes.	
§63.9(b)(1)	Yes.	
§63.9(b)(2)	Yes	Except §63.3400(b)(1) requires submittal of initial notification for existing affected sources no later than 1 year before compliance date.
§63.9(b)(3)-(5)	Yes.	
§63.9(c)-(e)	Yes.	
§63.9(f)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§63.9(g)	Yes	Provisions for COMS are not applicable.
§63.9(h)(1)-(3)	Yes.	
§63.9(h)(4)	No	Reserved.
§63.9(h)(5)-(6)	Yes.	
§63.9(i)	Yes.	
§63.9(j)	Yes.	
§63.10(a)	Yes.	
§63.10(b)(1)-(3)	Yes	§63.10(b)(2)(i) through (v) only apply if you use a capture and control system.
§63.10(c)(1)	Yes.	
§63.10(c)(2)-(4)	No	Reserved.
§63.10(c)(5)-(8)	Yes.	
§63.10(c)(9)	No	Reserved.
§63.10(c)(10)-(15)	Yes.	
§63.10(d)(1)-(2)	Yes.	

§63.10(d)(3)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§63.10(d)(4)-(5)	Yes.	
§63.10(e)(1)-(2)	Yes	Provisions for COMS are not applicable.
§63.10(e)(3)-(4)	No.	
§63.10(f)	Yes.	
§63.11	No.	
§63.12	Yes.	
§63.13	Yes.	
§63.14	Yes	Subpart JJJJ includes provisions for alternative ASME test methods that are incorporated by reference.
§63.15	Yes.	

Appendix H

40 CFR Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

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SOURCE: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (Eq.\ 1)$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_O} \quad (Eq. 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.*, thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-

emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
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	a. maintain your catalyst so that the pressure drop

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.	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	a. Change oil and filter every	Minimize the engine's time spent at idle and

black start stationary CI RICE[1]	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 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.	
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.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law,

the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2] Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually,	

	whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas	a. Change oil and filter every 1,440 hours of	

equivalent to 10 percent or more of the gross heat input on an annual basis	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:

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60,	(c) The CO concentration must be at 15 percent O_2, dry basis.

			appendix A-4	
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.

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 stationary 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 formaldehyde 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 stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)^{ac}, Method 320 of 40 CFR part 63, appendix A, or	(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.

			ASTM D6348-03[a]	

[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	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

at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP		parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
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	i. The average reduction of emissions of formaldehyde determined from the initial

	emissions and using NSCR	performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and

		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		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.
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.
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	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

	NSCR	§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
		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	a. Reduce CO	i. Conducting performance tests every

are not limited use stationary RICE	emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	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.
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.
		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	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).

hours per calendar year			
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures	Yes.	

	and criteria		
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require

			COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.

§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and $O_{2.}$ Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) “ICAC Test Protocol for Periodic Monitoring”, EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility__________ Engine I.D.__________ Date______											
Run Type:	(_)			(_)				(_)		(_)	
(X)	Pre-Sample Calibration			Stack Gas Sample				Post-Sample Cal. Check		Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
″											
″											
″											
″											
Measurement Data Phase											
″											
″											
″											
″											
″											
″											
″											
″											
″											
″											
Mean											
Refresh											

Phase											
″											
″											
″											
″											

[78 FR 6721, Jan. 30, 2013]

Appendix I

40 CFR Part 60, Subpart IIII—*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

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

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SOURCE: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

Emission Standards for Manufacturers

§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Other Requirements for Owners and Operators

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

Compliance Requirements

§60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power.

The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Testing Requirements for Owners and Operators

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad (\text{Eq. 1})$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i = concentration of NO_X or PM at the control device inlet,

C_o = concentration of NO_X or PM at the control device outlet, and

R = percent reduction of NO_X or PM emissions.

(2) You must normalize the NO_X or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\, O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

$\%O_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209_{F_d}}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_X concentration in ppm.

$1.912x10^{-3}$ = 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.

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

Special Requirements

§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.

(c) Manufacturers, owners and operators of stationary CI ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in §60.4202 and §60.4205, and not those for non-emergency engines in §60.4201 and §60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §60.4201 and §60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011]

§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

§60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	$NMHC + NO_X$	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines

	according to §60.4202(d)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1] Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO$_X$	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	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	a. Reduce NO_X emissions by 90	i. Select the sampling port location and		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in

combustion engine with a displacement of ≥ 30 liters per cylinder	percent or more;	number/location of traverse points at the inlet and outlet of the control device;		diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O_2 at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_X concentration.
		iv. Measure NO_X at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point

				long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(3) Method 7E of 40 CFR part 60, Appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.

		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3.	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[79 FR 11251, Feb. 27, 2014]

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).

§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Appendix J

Emission Factors Used to Develop the PAL Application

PM/PM$_{10}$/PM$_{2.5}$ Emission Factors

SN	Fuel Type	PM Emission Factors[1,2]		Cumulative Mass % PM$_{10}$	Cumulative Mass % PM$_{2.5}$	Source
Bark Boiler (SN-01)	Bark	0.066	lb/MMBtu (FPM)	98%	98%	NCASI Technical Bulletin 1020, Table 10.5 (*Wet Scrubber*)
		0.00393	lb/MMBtu (CPM)	100%	100%	NCASI Technical Bulletin 1020, Table 10.4 (*Wet Scrubber*)
	Fuel Oil	13.13	lb/1000 gal (FPM)	18%	4%	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
		1.5	lb/1000 gal (CPM)	100%	100%	
	Natural Gas	7.6	lb/MMscf	100%	100%	NCASI Technical Bulletin 1020, Table 10.1
	Sludge	0.066	lb/MMBtu (FPM)	98%	98%	AP-42, Table 1.6-1
		0.017	lb/MMBtu (CPM)	100%	100%	
	TDF	0.188	lb/MMBtu	100%	100%	NCASI Bulletin 906; Table 3.8
	Rice Hulls	15.6	lb/ton rice hulls	100%	100%	Documentation for 2002 EGU National Emissions Inventory, Table 6, Code AB
	Waste Paper	0.066	lb/MMBtu (FPM)	98%	98%	AP-42, Table 1.6-1
		0.017	lb/MMBtu (CPM)	100%	100%	
Power Boilers (SN-13 & 15)	Fuel Oil	13.13	lb/1000 gal (FPM)	18%	4%	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
		1.5	lb/1000 gal (CPM)	100%	100%	
	Natural Gas	7.6	lb/MMscf	100%	100%	NCASI Technical Bulletin 1020, Table 10.1
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	7.6	lb/MMscf	100%	100%	AP-42, Table 1.4-2
Off Machine Coaters (SN-41 & 42)	Natural Gas	7.6	lb/MMscf	100%	100%	AP-42, Table 1.4-2
No. 2 Recovery Boiler (SN-02)	BLS	0.70	lb/ton BLS (FPM)	56.7%	39.7%	NCASI Technical Bulletin 1020, Table 4.11
		0.33	lb/ton BLS (CPM)	100%	100%	
	Fuel Oil	13.13	lb/1000 gal (FPM)	18%	4%	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
		1.5	lb/1000 gal (CPM)	100%	100%	
	Natural Gas	7.6	lb/MMscf	100%	100%	NCASI Technical Bulletin 1020, Table 10.1
No. 3 Recovery Boiler (SN-03)	BLS	0.70	lb/ton BLS (FPM)	56.7%	39.7%	NCASI Technical Bulletin 1020, Table 4.11
		0.33	lb/ton BLS (CPM)	100%	100%	
	Fuel Oil	13.13	lb/1000 gal	18%	4%	NCASI Technical Bulletin 1020,

SN	**Fuel Type**	**PM Emission Factors[1,2]**		**Cumulative Mass % PM_{10}**	**Cumulative Mass % $PM_{2.5}$**	**Source**
			(FPM)			Table 10.2 (*No. 6 Fuel Oil*)
		1.5	lb/1000 gal (CPM)	100%	100%	
	Natural Gas	7.6	lb/MMscf	100%	100%	NCASI Technical Bulletin 1020, Table 10.1
No. 4 Recovery Boiler (SN-04)	BLS	0.70	lb/ton BLS (FPM)	56.7%	39.7%	NCASI Technical Bulletin 1020, Table 4.11
		0.33	lb/ton BLS (CPM)	100%	100%	
	Fuel Oil	13.13	lb/1000 gal (FPM)	18%	4%	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
		1.5	lb/1000 gal (CPM)	100%	100%	
	Natural Gas	7.6	lb/MMscf	100%	100%	NCASI Technical Bulletin 1020, Table 10.1
Lime Kilns (SN-09 & SN-10)	Natural Gas	1.16	lb/ton CaO (FPM)	100%	100%	NCASI Technical Bulletin 1020, Table 4.13
		0.095	lb/ton CaO (CPM)	100%	100%	
	Fuel Oil	1.16	lb/ton CaO (FPM)	100%	100%	NCASI Technical Bulletin 1020, Table 4.13
		0.095	lb/ton CaO (CPM)	100%	100%	
	Petroleum Coke	0.183	lb/ton CaO	100%	100%	NCASI Technical Bulletin 906, Table 4.6
No. 2 Smelt Dissolving Tanks (SN-06)		0.15	lb/ton BLS (FPM)	100%	100%	NCASI Technical Bulletin 1020, Table 4.15
		0.012	lb/ton BLS (CPM)	100%	100%	
No. 3 Smelt Dissolving Tank (SN-07)		0.15	lb/ton BLS (FPM)	100%	100%	NCASI Technical Bulletin 1020, Table 4.15
		0.012	lb/ton BLS (CPM)	100%	100%	
No. 4 Smelt Dissolving Tanks (SN-08)		0.15	lb/ton BLS (FPM)	100%	100%	NCASI Technical Bulletin 1020, Table 4.15
		0.012	lb/ton BLS (CPM)	100%	100%	
Lime Slaker/ Causticizers (SN-11)		0.029	lb/ton CaO	100%	100%	NCASI Technical Bulletin 1020, Table 4.14
Lime Handling (SN-20)		0.09	lb/ton CaO	100%	100%	AP-42, Table 11.17-4 (Product loading, enclosed truck, uncontrolled); 85% Scrubber control efficiency
Woodyard Chip Piles (SN-50)		0.0013	lb/ton chips or bark	47.3%	7.2%	AP-42, Chapter 13, Section 13.2.4.3 (See SN-50 EF Development tab)
Chip Mill (SN-100)	Log Cutting & Debarking	0.0374	lb/ton logs	47.3%	7.2%	Updated Title V Renewal Application Methodology (see SN-100 EF Development tab)
	Chipping	0.0013	lb/ton chips	47.3%	7.2%	
	Bark	0.0013	lb/ton bark	47.3%	7.2%	

SN	Fuel Type	PM Emission Factors[1,2]		Cumulative Mass % PM_{10}	Cumulative Mass % $PM_{2.5}$	Source
	Hogging					
Pulp Mill Road Fugitives (SN-56)		4.20	lb/VMT	24.5%	2.5%	AP-42, Chapter 13, Section 13.2.2
Chip Mill Road Fugitives (SN-101)		4.81	lb/VMT	24.5%	2.5%	AP-42, Chapter 13, Section 13.2.3
AKD Sizing (SN-113)	Starch	0.006	lb/lb usage	100%	100%	Vendor Information
	Dispersant	0.001	lb/lb usage	100%	100%	
No. 1 Kiln Auxiliary Drive (SN-114)	No. 2 Fuel Oil	0.30	g/kW-hr	100%	100%	EPA Nonroad Diesel Tier 4 Emission Standard
Emergency Pump Engines (SN-115 & 117 - 122)	No. 2 Fuel Oil	0.00220	lb/hp-hr	100%	100%	AP-42, Table 3.3-1
Mud Storage Rake Auxiliary Drive (SN-116)	Gasoline	0.000721	lb/hp-hr	100%	100%	AP-42, Table 3.3-1

[1] NCASI factors used are median values.

[2] FPM = Filterable particulate; CPM = Condensible particulate

NO$_x$ Emission Factors

SN	Fuel Type	NO$_x$ Emission Factors[1]		Source
Bark Boiler (SN-01)	Bark	0.203	lb/MMBtu	NCASI Technical Bulletin 1020, Table 10.4 (*Wood w/o Significant UF Resin Content)*
	Fuel Oil	47	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*Boiler >100 MMBtu/hr, normal firing, No. 6 Fuel Oil*)
	Natural Gas	280	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1 (*Large wall-fired boilers (>100 MMBtu/hr), uncontrolled, pre-NSPS*)
	Sludge	0.22	lb/MMBtu	AP-42, Table 1.6-2
	TDF	0.162	lb/MMBtu	EPA Doc 450/3-97-024, Table 5-6
	Rice Hulls	1.2	lb/ton rice hulls	Documentation for 2002 EGU National Emissions Inventory, Table 6, Code AB
	Waste Paper	0.22	lb/MMBtu	AP-42, Table 1.6-2
Power Boilers (SN-13 & 15)	Fuel Oil	47	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*Boiler >100 MMBtu/hr, normal firing, No. 6 Fuel Oil*)
	Natural Gas	280	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1 (*Large wall-fired boilers (>100 MMBtu/hr), uncontrolled, pre-NSPS*)
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	100	lb/MMscf	AP-42, Table 1.4-1
Off Machine Coaters (SN-41 & 42)	Natural Gas	100	lb/MMscf	AP-42, Table 1.4-1
Recovery Boilers (SN-02 thru SN-04)	BLS	1.33	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.11
	Fuel Oil	47	lb/1000 gal	AP-42, Table 1.3-1
	Natural Gas	280	lb/MMscf	AP-42, Table 1.4-1
Lime Kilns (SN-09 & SN-10)	Natural Gas	0.7	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13
	Fuel Oil	1.15	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13
	Petroleum Coke	1.165	lb/ton CaO	NCASI Technical Bulletin 906, Table 4.6
No. 1 Kiln Auxiliary Drive (SN-114)	No. 2 Fuel Oil	6.57	g/kW-hr	derived from EPA Nonroad Diesel Tier 4 Emission Standard
No. 2 Kiln Auxiliary Drive (SN-115)	No. 2 Fuel Oil	6.9	g/hp-hr	EPA Nonroad Diesel Tier 1 Emission Standard
Mud Storage Rake Auxiliary Drive (SN-116)	Gasoline	0.011	lb/hp-hr	AP-42, Table 3.3-1
Emergency Pump Engines (SN-117 - 122)	No. 2 Fuel Oil	0.031	lb/hp-hr	AP-42, Table 3.3-1

[1] NCASI factors used are median values.

CO Emission Factors

SN	Fuel Type	CO Emission Factors[1]		Source
Bark Boiler (SN-01)	Bark	0.502	lb/MMBtu	NCASI Technical Bulletin 1020, Table 10.4 (*Stokers*)
	Fuel Oil	5	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	84	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1 (*Large wall-fired boilers >100 MMBtu/hr*)
	Sludge	0.6	lb/MMBtu	AP-42, Table 1.6-2
	TDF	0	lb/MMBtu	EPA Doc 450/3-97-024, Table 5-6
	Rice Hulls	0.6	lb/ton rice hulls	Documentation for 2002 EGU National Emissions Inventory, Table 6, Code AB
	Waste Paper	0.6	lb/MMBtu	AP-42, Table 1.6-2
Power Boilers (SN-13 & 15)	Fuel Oil	5	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	84	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1 (*Large wall-fired boilers >100 MMBtu/hr*)
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	84	lb/MMscf	AP-42, Table 1.4-2
Off Machine Coaters (SN-41 & 42)	Natural Gas	84	lb/MMscf	AP-42, Table 1.4-2
Recovery Boilers (SN-02 thru SN-04)	BLS	1.21	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.11
	Fuel Oil	5	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	84	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
Lime Kilns (SN-09 & SN-10)	Natural Gas	0.06	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13
	Fuel Oil	0.06	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13
	Petroleum Coke	0.111	lb/ton CaO	NCASI Technical Bulletin 906, Table 4.6
Smelt Dissolving Tanks (SN-06 thru SN-08)		0.008	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.15
Bleach Plant (SN-24 thru 27 & SN-45 thru 47)		0.926	lb/ADTBP	Facility Stack Test Data (per Title V Renewal)
Landfill (SN-57)		0.0433	lb/ton waste	Estimated using Landfill Gas Emissions Model (LandGEM) Version 3.02
No. 1 Kiln Auxiliary Drive (SN-114)	No. 2 Fuel Oil	5.5	g/kW-hr	EPA Nonroad Diesel Tier 4 Emission Standard
Emergency Pump Engines (SN-115 & 117 - 122)	No. 2 Fuel Oil	0.00668	lb/hp-hr	AP-42, Table 3.3-1
Mud Storage Rake	Gasoline	0.00696	lb/hp-hr	AP-42, Table 3.3-1

SN	Fuel Type	CO Emission Factors[1]		Source
Auxiliary Drive (SN-116)				

[1] NCASI factors used are median values.

SO_2 Emission Factors

SN	Fuel Type	SO_2 Emission Factors[1]		Source
Bark Boiler (SN-01)	Bark	0.00318	lb/MMBtu	NCASI Technical Bulletin 1020, Table 10.4
	Fuel Oil	157	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	0.6	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
	Sludge	0.025	lb/MMBtu	AP-42, Table 1.6-2
	TDF	0.059	lb/MMBtu	EPA Doc 450/3-97-024, Table 5-6
	Rice Hulls	0.08	lb/ton rice hulls	Documentation for 2002 EGU National Emissions Inventory, Table 6, Code AB
	Waste Paper	0.025	lb/MMBtu	AP-42, Table 1.6-2
Power Boilers (SN-13 & 15)	Fuel Oil	157	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	0.6	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	0.6	lb/MMscf	AP-42, Table 1.4-2
Off Machine Coaters (SN-41 & 42)	Natural Gas	0.6	lb/MMscf	AP-42, Table 1.4-2
Recovery Boilers (SN-02 thru SN-04)	BLS	0.2	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.11
	Fuel Oil	157	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	0.6	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
Lime Kilns (SN-09 & SN-10)	Natural Gas	0.02	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13 (*Kilns with wet scrubbers*)
	Fuel Oil	0.02	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13 (*Kilns with wet scrubber*s)
	Petroleum Coke	0.039	lb/ton CaO	NCASI Technical Bulletin 906, Table 4.6
Smelt Dissolving Tanks (SN-06 thru SN-08)		0.006	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.15
Emergency Engines (SN-114, 115 & 117 - 122)	No. 2 Fuel Oil	0.00205	lb/hp-hr	AP-42, Table 3.3-1
Mud Storage Rake Auxiliary Drive (SN-116)	Gasoline	0.000591	lb/hp-hr	AP-42, Table 3.3-1

[1] NCASI factors used are median values.

VOC Emission Factors

SN	Fuel Type	VOC Emission Factors[1]		Source
Bark Boiler (SN-01)	Bark	0.00257	lb/MMBtu	NCASI Technical Bulletin 1020, Table 10.4
	Fuel Oil	0.28	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	5.5	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
	Sludge	0.017	lb/MMBtu	AP-42, Table 1.6-3
	TDF	0	lb/MMBtu	EPA Doc 450/3-97-024, Table 5-6
	Rice Hulls	0.17	lb/ton rice hulls	Documentation for 2002 EGU National Emissions Inventory, Table 6, Code AB
	Waste Paper	0.017	lb/MMBtu	AP-42, Table 1.6-3
Power Boilers (SN-13 & 15)	Fuel Oil	0.28	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	5.5	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	5.5	lb/MMscf	AP-42, Table 1.4-2
Off Machine Coaters (SN-41 & 42)	Natural Gas	5.5	lb/MMscf	AP-42, Table 1.4-2
Recovery Boilers (SN-02 thru SN-04)	BLS	0.21	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.11
	Fuel Oil	0.28	lb/1000 gal	NCASI Technical Bulletin 1020, Table 10.2 (*No. 6 Fuel Oil*)
	Natural Gas	5.5	lb/MMscf	NCASI Technical Bulletin 1020, Table 10.1
Lime Kilns (SN-09 & SN-10)	Natural Gas	0.02	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13
	Fuel Oil	0.02	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.13
	Petroleum Coke	0.014	lb/ton CaO	NCASI Technical Bulletin 906, Table 4.6
Smelt Dissolving Tanks (SN-06 thru SN-08)		0.01	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.15
Bleach Plant (SN-24 thru 27 & SN-45 thru 47)		0.0844	lb/ODTUBP	NCASI Technical Bulletin 1020, Table 4.9
Landfill (SN-57)		0.5710	lb/ton waste	Estimated using Landfill Gas Emissions Model (LandGEM) Version 3.02
Digesters and Blow Tank (SN-51)		0.012	lb/ton chips	NCASI Technical Bulletin 1020, Table 4.2
Pulping (SN-22, 23 & 44)	Brownstock Washers	0.209	lb/ADTUBP	NCASI Technical Bulletin 1020, Table 4.6
	Pulp Knotters	0.005	lb/ADTUBP	NCASI Technical Bulletin 1020, Table 4.5
	Pre- & Post-Washer Screens	0.004	lb/ADTUBP	NCASI Technical Bulletin 1020, Table 4.5
Groundwood Mill (SN-52)		3.03	lb/ADTP	NCASI Technical Bulletin 1020, Table 7.1 (*Stone Gndwd, Spruce, Fir, S. Pine*)

SN	Fuel Type	VOC Emission Factors[1]		Source
Methanol Tank (SN-55)		0.00068	lb/gal	Estimated using Tanks 4.09d
No. 1 Paper Machine (SN-53)	Pulp	0.069	lb/ADTFP	NCASI Technical Bulletin 1020, Table 8.1 (*Bleached Paper & Pulp*)
	Additives	0.969	lb/ADTP	Historical and Vendor Data per Title V Renewal Application
No. 2 Paper Machine (SN-54)	Pulp	0.069	lb/ADTFP	NCASI Technical Bulletin 1020, Table 8.1 (*Bleached Paper & Pulp*)
	Additives	1.01	lb/ADTP	Historical and Vendor Data per Title V Renewal Application
Black Liquor Oxidation System (SN-21)		0.054	lb/ton BLS	NCASI Technical Bulletin 1020, Table 4.10
Process Liquor Tanks (SN-58)	Weak Black Liquor	0.54	lb/hr/tank	NCASI Technical Bulletin 1020, Table 4.3
	Strong Liquor	0.11	lb/hr/tank	NCASI Technical Bulletin 1020, Table 4.3
	Black Liquor Filters	0.00409	lb/ODTP	Emission Test Report-Aug. 2003 (Combined)
Lime Slaker/ Causticizers (SN-11)		0.057	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.14
Caustic Area (SN-48 & 59)	Green Liquor Clarifier	0.066	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.14
	Green Liquor Surge Tank	0.0014	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.14
	White Liquor & Weak Wash Pressure Filter	0.0075	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.14
	White Liquor Tank Pressure Filter	0.0056	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.14
	White Liquor Oxidation Tank	0.0123	lb/ton CaO	NCASI Technical Bulletin 1020, Table 4.14
Condensate Collection & Treatment (SN-49)		0.0988	ton/MMgal	Title V Renewal Application. Based on emission factors taken from EPA Pulp, Paper, and Paperboard Industry-Background Information for Proposed air Emission Standards. Manufacturing Processes at Kraft, Sulfite, Soda, and Semi-Chemical Mills (October 1993), Appendix B and C.
Woodyard Chip Piles (SN-50)		5.82	lb/acre-day	NCASI Technical Bulletin 700 (p.32-33) + NCASI Technical Bulletin 1020 Table A1
Chip Mill		0.13	lb/ton chips	Title V Renewal Application

SN	Fuel Type	VOC Emission Factors[1]		Source
)SN-100)				
No. 1 Kiln Auxiliary Drive (SN-114)	No. 2 Fuel Oil	0.93	g/kW-hr	derived from EPA Nonroad Diesel Tier 4 Emission Standard
Emergency Pump Engines (SN-115 & 117 - 122)	No. 2 Fuel Oil	0.00247	lb/hp-hr	AP-42, Table 3.3-1
Mud Storage Rake Auxiliary Drive (SN-116)	Gasoline	0.015	lb/hp-hr	AP-42, Table 3.3-1

[1] NCASI factors used are median values; VOC is expressed as C as measured by EPA Method 25A.

TRS Emission Factors

SN	Fuel Type	TRS Emission Factors[1]		Source
Smelt Dissolving Tanks (SN-06 thru SN-08)		0.0187	lb/ton BLS	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Smelt_Dissolving_Tank_WetScrub
Bleach Plant (SN-24 thru 27 & SN-45 thru 47)		0.0102	lb/ADTBP	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Bleach_Plant_Scrubber_nonECF
Landfill (SN-57)		0.0022	lb/ton waste	Estimated using Landfill Gas Emissions Model (LandGEM) Version 3.02
Digesters and Blow Tank (SN-51)		0.000630	lb/OD ton chips	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: NCG_Batch_Digester_Fill_Exhaust
Pulping (SN-22, 23 & 44)	Brownstock Washers	0.0549	lb/ADTUBP	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Pulp_BSW_System_VacDrum_ShwrWtr</=300ppmMeOH
	Pulp Knotters	0.019	lb/ADTUBP	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Pulp_Pre-BSW_Knotter_System
	Pre- & Post-Washer Screens	0.000398	lb/ADTUBP	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Pulp_PreOrPost_BSW_Screening_System
Black Liquor Oxidation System (SN-21)		0.0918	lb/ton BLS	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Black_Liquor_Oxidation_Tank
Process Liquor Tanks (SN-58)	Weak Black Liquor	0.246	lb/hr/tank	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Black_Liquor_Tank_Weak</=20%Solids
	Strong Liquor	0.0743	lb/hr/tank	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Black_Liquor_Tank_Heavy>20%Solids
Lime Slaker/ Causticizers (SN-11)	Slaker	0.00878	lb/ton CaO	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Slaker_Scrubber_Vent
	Causticizers	0.0555	lb/ton CaO	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Causticizers
Caustic Area (SN-48 & 59)	Green Liquor Storage	0.066	lb/hr/tank	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Green_Liquor_Storage_Tank
	White Liquor	0.0123	lb/hr/tank	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar.

SN	Fuel Type	TRS Emission Factors[1]		Source
	Storage			2013 Update) - Unit Op: Caustic_White_Liquor_Storage_Tank
Condensate Collection & Treatment (SN-49)		0.0498	ton/MMgal	Title V Renewal Application. Based on NCASI pulp mill test data.

[1] NCASI factors used are median values; TRS is expressed as S.

Lead Emission Factors

SN	Fuel Type	Lead Emission Factors[1]		Source
Bark Boiler (SN-01)	Bark	3.49E-05	lb/MMBtu	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_Wood_WetScrub
	Fuel Oil	1.51E-03	lb/1000 gal	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_FuelOil6
	Natural Gas	5.00E-04	lb/MMscf	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_NatGas
	Sludge	4.80E-05	lb/MMBtu	AP-42, Table 1.6-4
	TDF	1.00E-04	lb/MMBtu	NCASI Bulletin 906; Table 3.8
	Rice Hulls	0	lb/ton rice hulls	Documentation for 2002 EGU National Emissions Inventory (No Lead emissions reported)
	Waste Paper	4.80E-05	lb/MMBtu	AP-42, Table 1.6-4
Power Boilers (SN-13 & 15)	Fuel Oil	1.51E-03	lb/1000 gal	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_FuelOil6
	Natural Gas	5.00E-04	lb/MMscf	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_NatGas
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	0.0005	lb/MMscf	AP-42, Table 1.4-2
Off Machine Coaters (SN-41 & 42)	Natural Gas	0.0005	lb/MMscf	AP-42, Table 1.4-2
Recovery Boilers (SN-02 thru SN-04)	BLS	7.30E-06	lb/ton BLS	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Furnace_DCE
	Fuel Oil	1.51E-03	lb/1000 gal	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_FuelOil6
	Natural Gas	5.00E-04	lb/MMscf	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_NatGas
Lime Kilns (SN-09 & SN-10)	Natural Gas	2.86E-04	lb/ton CaO	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Lime_Kiln_WetScrub
	Fuel Oil	2.86E-04	lb/ton CaO	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Lime_Kiln_WetScrub
	Petroleum Coke	6.30E-04	lb/ton CaO	NCASI Technical Bulletin 906, Table 4.7
Smelt Dissolving Tanks (SN-06 thru SN-08)		6.90E-07	lb/ton BLS	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Smelt_Dissolving_Tank_WetScrub

[1] NCASI factors used are median values

Fluoride Emission Factors

SN	Fuel Type	Fluoride Emission Factors[1]		Source
Bark Boiler (SN-01)	Bark	8.50E-06	lb/MMBtu	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_Wood_WetScrub
	Fuel Oil	0	lb/1000 gal	Sources show no HF emissions
	Natural Gas	0	lb/MMscf	Sources show no HF emissions
	Sludge	0	lb/MMBtu	Sources show no HF emissions
	TDF	0	lb/MMBtu	Sources show no HF emissions
	Rice Hulls	0	lb/ton rice hulls	Sources show no HF emissions
	Waste Paper	0	lb/MMBtu	Sources show no HF emissions

[1] NCASI factors used are median values

H_2SO_4 Emission Factors

SN	Fuel Type	H_2SO_4 Emission Factors[1]		Source
Power Boilers (SN-13 & 15)	Fuel Oil	2.45	lb/1000 gal	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_FuelOil6
	Natural Gas	0	lb/MMscf	
Recovery Boilers (SN-02 thru SN-04)	BLS	0.011	lb/ton BLS	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Recovery_Furnace_DCE
	Fuel Oil	2.45	lb/1000 gal	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Boiler_FuelOil6
	Natural Gas	0	lb/MMscf	
Lime Kilns (SN-09 & SN-10)	Natural Gas	6.80E-07	lb/ton CaO (Gas-In)	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Lime_Kiln_WetScrub
	Fuel Oil	0.021	lb/ton CaO (Oil-In)	NCASI EMISSION FACTORS FOR PULP AND PAPER MILLS - AIR TOXICS (Jan. 2013 Version-Mar. 2013 Update) - Unit Op: Caustic_Lime_Kiln_WetScrub
	Petroleum Coke	0	lb/ton CaO	NCASI Technical Bulletin 906 (no emissions shown)

[1] NCASI factors used are median values

Greenhouse Gases Emission Factors

SN	Fuel Type	CO_2	CH_4	N_2O	Units	Source
Bark Boiler (SN-01)	Bark	93.80	0.0072	0.0036	kg/MMBtu	40 CFR Part 98, Table C-1
	Fuel Oil	75.10	0.003	0.0006	kg/MMBtu	40 CFR Part 98, Table C-1
	Natural Gas	53.06	0.001	0.0001	kg/MMBtu	40 CFR Part 98, Table C-1
	Sludge	93.80	0.0072	0.0036	kg/MMBtu	40 CFR Part 98, Table C-1
	TDF	85.97	0.032	0.0042	kg/MMBtu	40 CFR Part 98, Table C-1
	Rice Hulls	118.17	0.032	0.0042	kg/MMBtu	40 CFR Part 98, Table C-1
	Waste Paper	93.80	0.0072	0.0036	kg/MMBtu	40 CFR Part 98, Table C-1
Power Boilers (SN-13 & 15)	Fuel Oil	75.10	0.003	0.0006	kg/MMBtu	40 CFR Part 98, Table C-1
	Natural Gas	53.06	0.001	0.0001	kg/MMBtu	40 CFR Part 98, Table C-1
No.6-No.9 Extruders (SN-28 - 40)	Natural Gas	53.06	0.001	0.0001	kg/MMBtu	40 CFR Part 98, Table C-1
Off Machine Coaters (SN-41 & 42)	Natural Gas	53.06	0.001	0.0001	kg/MMBtu	40 CFR Part 98, Table C-1
Recovery Boilers (SN-02 thru SN-04)	BLS	94.4	0.0019	0.00042	kg/MMBtu	40 CFR Part 98, Table AA-1
	Fuel Oil	75.10	0.003	0.0006	kg/MMBtu	40 CFR Part 98, Table C-1
	Natural Gas	53.06	0.001	0.0001	kg/MMBtu	40 CFR Part 98, Table C-1
Lime Kilns (SN-09 & SN-10)	Natural Gas	53.06	0.0027	0	kg/MMBtu	46 CFR Part 98, Table C-1 & Table AA-2
	Fuel Oil	75.10	0.0027	0	kg/MMBtu	46 CFR Part 98, Table C-1 & Table AA-2
	Petroleum Coke	102.41	0.0027	0	kg/MMBtu	46 CFR Part 98, Table C-1 & Table AA-2
Emergency Engines (SN-114, 115 & 117 - 122)	No. 2 Fuel Oil	73.96	0.003	0.0006	kg/MMBtu	40 CFR Part 98, Table C-1
Mud Storage Rake Auxiliary Drive (SN-116)	Gasoline	70.22	0.003	0.0006	kg/MMBtu	41 CFR Part 98, Table C-1

Appendix K

40 CFR Part 63, Subpart DDDDD—*National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

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SOURCE: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

What This Subpart Covers

§63.7480   What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

§63.7485   Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

[78 FR 7162, Jan. 31, 2013]

§63.7490   What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in §63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in §63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in §63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

§63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 85 percent natural gas on an annual heat input basis.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see §63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers and process heaters as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler or process heater specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in §63.1200(b) is not covered by Subpart EEE.

(n) Residential boilers as defined in this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72806, Nov. 20, 2015]

§63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in §63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in §63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart and are no longer subject to part 60, subparts CCCC or DDDD beginning on the effective date of the switch as identified under the provisions of §60.2145(a)(2) and (3) or §60.2710(a)(2) and (3).

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in §63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, you must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

Emission Limitations and Work Practice Standards

§63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in §63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under §63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in

Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using equation 21 of §63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011 and before April 1, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under §63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in §63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

§63.7501 [Reserved]

General Compliance Requirements

§63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in §63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in §63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of §63.7525. Using the process described in §63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of "startup" in §63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

Testing, Fuel Analyses, and Initial Compliance Requirements

§63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance (stack) testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to §63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under §63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to §63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to §63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to §63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to §63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart and establish operating limits according to §63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to §63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, as specified in §63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with §63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.

(f) For new or reconstructed affected sources (as defined in §63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in §63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in §63.7515(d) following the initial compliance date specified in §63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in §63.7515(d).

(h) For affected sources (as defined in §63.7490) that ceased burning solid waste consistent with §63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in §63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in §63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in §63.7495.

(k) For affected sources, as defined in §63.7490, that switch subcategories consistent with §63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

[78 FR 7164, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

§63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to §63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under §63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to §63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in §63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on one day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to §63.7530 and

Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550.

(g) For affected sources (as defined in §63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) and the schedule described in §63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra-low sulfur liquid fuel, you do not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in §63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in §63.7510(a).

[78 FR 7165, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

§63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in §63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

§63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in §63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in §63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in §63.7510(a), you must obtain a composite fuel sample during each performance test run.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in §63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to this subpart.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in §63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart. When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in §63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

§63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of §63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are subject to numeric emission limits following the compliance date specified in §63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Hm\right) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq.1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times So\right) \div \sum_{i=1}^{n} So \qquad \text{(Eq.1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c). If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, Eadj, determined according to §63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Eo \right) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq.1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c). If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, Eadj, determined according to §63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Sm \times Cfi \right) \div \sum_{i=1}^{n} \left(Sm \times Cfi \right) \qquad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in §63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Hb\right) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times So\right) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, E_{adj}, determined according to §63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Eo\right) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, E_{adj}, determined according to §63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Sa \times Cfi\right) \div \sum_{i=1}^{n} \left(Sa \times Cfi\right) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in §63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with §63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to §63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in §63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n}(ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).

Eli = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu or ppm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in §63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in §63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013; 80 FR 72809, Nov. 20, 2015]

§63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in §63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide (CO_2)) according to the procedures in paragraphs (a)(1) through (6) of this section.

(1) Install the CO CEMS and oxygen (or CO_2) analyzer by the compliance date specified in §63.7495. The CO and oxygen (or CO_2) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the CO emissions limit be determined using CO_2 as a diluent correction in place of oxygen at 3 percent. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter (if an CO_2 analyzer is used); the site-specific monitoring plan developed according to §63.7505(d); and the requirements in §63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to §63.7505(d), and the requirements in §63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in §63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with §63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(vi) When CO_2 is used to correct CO emissions and CO_2 is measured on a wet basis, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: A continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O_2 both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.,* a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (*e.g.,* hourly average wet-and dry basis O_2 values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or CO_2) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO_2) data concurrently. Collect at least four CO and oxygen (or CO_2) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in §63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to an CO_2 percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in §63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in §63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in §63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (*e.g.,* bag leak detectors, ESP secondary power, and PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of §60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in §63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in §63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in §63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in §63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of §63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in §63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in §63.7535(b), and comply with the data calculation requirements specified in §63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in §63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in §63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.*, PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.*, check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in §63.7540(a)(14) for a mercury CEMS and §63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an SO_2 CEMS to demonstrate continuous compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in §63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You

must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in §63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in §63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in §63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013; 80 FR 72810, Nov. 20, 2015]

§63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to §63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by §63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to §63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in §63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to §63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in §63.7510(a)(2). (Note that §63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} \left(Ci \times Qi\right) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to §63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \qquad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to §63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} \left(TSMi \times Qi\right) \quad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to §63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in §63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$\mathrm{R} = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 30 operating days.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the “back half” for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in §63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in §63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in §63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to §63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \qquad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} \left(Hgi90 \times Qi\right) \qquad \text{(Eq. 17)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} \left(TSM90i \times Qi\right) \qquad \text{(Eq. 18)}$$

Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d)[Reserved]

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analyses according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of this subpart.

(i) If you opt to comply with the alternative SO_2 CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and SO_2 CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with §63.7500(a)(3); and

(3) You establish a unit-specific maximum SO_2 operating limit by collecting the maximum hourly SO_2 emission rate on the SO_2 CEMS during the paired 3-run test for HCl. The maximum SO_2 operating limit is equal to the highest hourly average SO_2 concentration measured during the HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013; 80 FR 72811, Nov. 20, 2015]

§63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to §63.7522(e) and for demonstrating monthly compliance according to §63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: *http://www.epa.gov/ttn/atw/boiler/boilerpg.html.*

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.*, fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-

year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \qquad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in §63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to this subpart.

$$E_{adj} = E_{m} \times (1 - ECredits) \qquad \text{(Eq. 20)}$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_{m} = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under §63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

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Continuous Compliance Requirements

§63.7535   Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see §63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

§63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in §63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of §63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of §63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of §63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of §63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in §63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of §63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of §63.7530. If the results of recalculating the maximum mercury input using Equation 8 of §63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is subject to numeric emission limits.

(iii) Keep records of CO levels according to §63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in §63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in §63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in §63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in §63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in §63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using

Equation 9 of §63.7530. If the results of recalculating the maximum TSM input using Equation 9 of §63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of §63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i)

through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in §63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in §63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in §63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in §63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in §63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in §63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in §63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013, as amended at 80 FR 72813, Nov. 20, 2015]

§63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in §63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

Notification, Reports, and Records

§63.7545 What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at §63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under §241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of §241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(iii) Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to §63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013; 80 FR 72814, Nov. 20, 2015]

§63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with §63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of §63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of §63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of §63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of §63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of §63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of §63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of §63.7530 or the maximum mercury input operating limit using Equation 8 of §63.7530, or the maximum TSM input operating limit using Equation 9 of §63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in §63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with §63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in §63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO_2, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of §63.7555(d).

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in §63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in §63.2) required by this subpart, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (h)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*http://www.epa.gov/ttn/chief/ert/index.html*), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[78 FR 7183, Jan. 31, 2013, as amended at 80 FR 72814, Nov. 20, 2015]

§63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in §63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in §241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under §241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of §63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that

demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of §63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of §63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of §63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(5) If, consistent with §63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of §63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of §63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of “startup” in §63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of “startup” in §63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (*e.g.,* CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the

control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of “startup” in §63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in §63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer's statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

(e) If you elect to average emissions consistent with §63.7522, you must additionally keep a copy of the emission averaging implementation plan required in §63.7522(g), all calculations required under §63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with §63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to §63.7533, you must keep a copy of the Implementation Plan required in §63.7533(d) and copies of all data and calculations used to establish credits according to §63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by §63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013; 80 FR 72816, Nov. 20, 2015]

§63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

§63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in §63.7500(a) and (b) under §63.6(g), except as specified in §63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under §63.7(e)(2)(ii) and (f) and as defined in §63.90, and alternative analytical methods requested under §63.7521(b)(2).

(3) Approval of major change to monitoring under §63.8(f) and as defined in §63.90, and approval of alternative operating parameters under §§63.7500(a)(2) and 63.7522(g)(2).

(4) Approval of major change to recordkeeping and reporting under §63.10(e) and as defined in §63.90.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7186, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

§63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see §63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in §241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Clean dry biomass means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see §63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation. (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see §60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (*e.g.,* steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (*e.g.,* steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (*e.g.,* steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (*e.g.,* product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (*e.g.,* for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (*e.g.,* if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see §63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in §241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* §63.14(b)).

Responsible official means responsible official as defined in §70.2.

Rolling average means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in §63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the measured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

Secondary material means the material as defined in §241.2 of this chapter.

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be the appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition, the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating (S_1), the energy content of turbine steam sent to process plus energy in electricity according to paragraph (2) of this definition (S_2), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this definition ($MW_{(3)}$) and would be calculated using Equation 21 of this section. In the case of boilers supplying steam to one or more common heaters, S_1, S_2, and $MW_{(3)}$ for each boiler would be calculated based on the its (steam energy) contribution (fraction of total steam energy) to the common heater.

$$SO_M = S_1 + S_2 + (MW_{(3)}\ x\ CFn) \qquad \text{(Eq. 21)}$$

Where:

SO_M = Total steam output for multi-function boiler, MMBtu

S_1 = Energy content of steam sent directly to the process and/or used for heating, MMBtu

S_2 = Energy content of turbine steam sent to the process plus energy in electricity according to (2) above, MMBtu

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh

CFn = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh

CFn for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1

CFn for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2

CFn for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler or process heater that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in §241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in §63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Useful thermal energy means energy (*i.e.*, steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, + 44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium + 32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10

11 39 40002, Duesseldorf, Germany, + 49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.*, California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.*, Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters

As stated in §63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07[a] lb per MMBtu of heat input	8.7E-07[a] lb per MMBtu of steam output or 1.1E-05[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM

				D6784[b] collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per	Collect a minimum of 2 dscm per run.

			MMBtu of steam output or 3.7E-04 lb per MWh)	
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04[a] lb per MMBtu of steam output or 1.2E-03[a] lb per MWh)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb	4.3E-03 lb per MMBtu of steam output or	Collect a minimum of 3 dscm per run.

	TSM)	per MMBtu of heat input)	4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1.1 lb per MMBtu of steam output or 1.0E + 01 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05[a] lb per MMBtu of heat input)	3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[d] 30-day rolling average)	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	5.3E-07[a] lb per MMBtu of steam output or 6.7E-06[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 lb per MMBtu of steam	Collect a minimum of 3 dscm per run.

			output or 1.1E-03 lb per MWh)	
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03[a] lb per MMBtu of steam output or 1.6E-02[a] lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provisions of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see §63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

[d] An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[78 FR 7193, Jan. 31, 2013, as amended at 80 FR 72819, Nov. 20, 2015]

Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters

As stated in §63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh	For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E-06 lb per MMBtu of heat input	6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

		volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)		
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 1 dscm per run.

9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input)	1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb per MMBtu of steam output or 1.7E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb	Collect a minimum of 2 dscm per run.

			per MWh)	
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06[a] lb per MMBtu of heat input	2.5E-06[a] lb per MMBtu of steam output or 2.8E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784,[b] collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.9E-03[a] lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03[a] lb per MMBtu of steam output or 1.1E-01[a] lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

	b. Filterable PM (or TSM)	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 2 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provisions of §63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see §63.14.

[c] An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[78 FR 7195, Jan. 31, 2013, as amended at 80 FR 72821, Nov. 20, 2015]

Table 3 to Subpart DDDDD of Part 63—Work Practice Standards

As stated in §63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .

1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in §63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in §63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in §63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in §63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:
	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management program

	and provide recommendations for improvements consistent with the definition of energy management program, if identified.
	f. A list of cost-effective energy conservation measures that are within the facility's control.
	g. A list of the energy savings potential of the energy conservation measures identified.
	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup	a. You must operate all CMS during startup. b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis. c. You have the option of complying using either of the following work practice standards. (1) If you choose to comply using definition (1) of “startup” in §63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR (2) If you choose to comply using definition (2) of “startup” in §63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels[a]. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in §63.7505(e). d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555.
6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this	You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown,

subpart during shutdown	you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas. You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555.

[a] As specified in §63.7555(d)(13), the source may request an alternative timeframe with the PM controls requirement to the permitting authority (state, local, or tribal agency) that has been delegated authority for this subpart by EPA. The source must provide evidence that (1) it is unable to safely engage and operate the PM control(s) to meet the "fuel firing + 1 hour" requirement and (2) the PM control device is appropriately designed and sized to meet the filterable PM emission limit. It is acknowledged that there may be another control device that has been installed other than ESP that provides additional PM control (*e.g.*, scrubber).

[78 FR 7198, Jan. 31, 2013, as amended at 80 FR 72823, Nov. 20, 2015]

Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters

As stated in §63.7500, you must comply with the applicable operating limits:

Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
1. Wet PM scrubber control on a boiler or process heater not using a PM CPMS	Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM emission limitation according to §63.7530(b) and Table 7 to this subpart.
2. Wet acid gas (HCl) scrubber[a] control on a boiler or process heater not using a HCl CEMS	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the performance test demonstrating compliance with the HCl emission limitation according to §63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on a boiler or process heater not using a PM CPMS	a. Maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average); or

	b. Install and operate a bag leak detection system according to §63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.
4. Electrostatic precipitator control on a boiler or process heater not using a PM CPMS	a. This option is for boilers and process heaters that operate dry control systems (*i.e.*, an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average).
	b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (*i.e.*, dry ESP). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to §63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler or process heater not using a mercury CEMS	Maintain the minimum sorbent or carbon injection rate as defined in §63.7575 of this subpart.
6. Any other add-on air pollution control type on a boiler or process heater not using a PM CPMS	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average).
7. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.
8. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O_2 analyzer system as specified in §63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in §63.7525(a).
9. SO_2 CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO_2 CEMS, maintain the 30-day rolling average SO_2 emission rate at or below the highest hourly average SO_2 concentration measured during the HCl performance test, as specified in Table 8.

[a] A wet acid gas scrubber is a control device that removes acid gases by contacting the combustion gas with an alkaline slurry or solution. Alkaline reagents include, but not limited to, lime, limestone and sodium.

[80 FR 72874, Nov. 20, 2015]

Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements

As stated in §63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .
1. Filterable PM	a. Select sampling ports	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.

	location and the number of traverse points	
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the PM emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
2. TSM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the TSM emission concentration	Method 29 at 40 CFR part 60, appendix A-8 of this chapter
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter.
	f. Convert emissions	Method 19 F-factor methodology at 40 CFR part 60,

	concentration to lb per MMBtu emission rates	appendix A-7 of this chapter.
4. Mercury	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the mercury emission concentration	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a]
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
5. CO	a. Select the sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine oxygen concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a]
	c. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	d. Measure the CO emission concentration	Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit.

[a] Incorporated by reference, see §63.14.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013; 80 FR 72825, Nov. 20, 2015]

Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements

As stated in §63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in §63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples	Procedure in §63.7521(c) or ASTM D5192,[a] or ASTM D7430,[a] or ASTM D6883,[a] or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for solid), or ASTM D4177[a]

		(for liquid), or ASTM D4057[a] (for liquid), or equivalent.
	b. Composite fuel samples	Procedure in §63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] (for biomass), or EPA 3050[a] (for solid fuel), or EPA 821-R-01-013[a] (for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173,[a] ASTM E871,[a] or ASTM D5864,[a] or ASTM D240, or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample	ASTM D6722[a] (for coal), EPA SW-846-7471B[a] or EPA 1631 or EPA 1631E (for solid samples), or EPA SW-846-7470A[a] (for liquid samples), or EPA 821-R-01-013 (for liquid or solid), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content	For fuel mixtures use Equation 8 in §63.7530.
2. HCl	a. Collect fuel samples	Procedure in §63.7521(c) or ASTM D5192,[a] or ASTM D7430,[a] or ASTM D6883,[a] or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in §63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), or ASTM D5198[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), ASTM D5864, ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a] or ASTM E871,[a] or D5864,[a] or ASTM D240,[a] or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure chlorine concentration in fuel sample	EPA SW-846-9250,[a] ASTM D6721,[a] ASTM D4208[a] (for coal), or EPA SW-846-5050[a] or ASTM E776[a] (for solid fuel), or EPA SW-846-9056[a] or SW-846-9076[a] (for solids or liquids) or equivalent.
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content	For fuel mixtures use Equation 7 in §63.7530 and convert from chlorine to HCl by multiplying by 1.028.
3. Mercury Fuel Specification for other gas 1 fuels	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter, or	Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954,[a] ASTM D6350,[a] ISO 6978-1:2003(E),[a] or ISO 6978-2:2003(E),[a] or EPA-1631[a] or equivalent.
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784[a] or equivalent.
4. TSM	a. Collect fuel samples	Procedure in §63.7521(c) or ASTM D5192,[a] or ASTM D7430,[a] or ASTM D6883,[a] or ASTM D2234/D2234M[a]

		(for coal) or ASTM D6323[a] (for coal or biomass), or ASTM D4177,[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in §63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] or TAPPI T266[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a] or ASTM E871,[a] or D5864, or ASTM D240,[a] or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample	ASTM D3683,[a] or ASTM D4606,[a] or ASTM D6357[a] or EPA 200.8[a] or EPA SW-846-6020,[a] or EPA SW-846-6020A,[a] or EPA SW-846-6010C,[a] EPA 7060[a] or EPA 7060A[a] (for arsenic only), or EPA SW-846-7740[a] (for selenium only).
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content	For fuel mixtures use Equation 9 in §63.7530.

[a] Incorporated by reference, see §63.14.

[80 FR 72825, Nov. 20, 2015]

Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits[ab]

As stated in §63.7520, you must comply with the following requirements for establishing operating limits:

Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits[ab]

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
1. PM, TSM, or mercury	a. Wet scrubber operating parameters	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to §63.7530(b)	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM, TSM, or mercury performance test	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests. (b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator	i. Establish a site-specific minimum total secondary	(1) Data from the voltage and	(a) You must collect secondary voltage and

	operating parameters (option only for units that operate wet scrubbers)	electric power input according to §63.7530(b)	secondary amperage monitors during the PM or mercury performance test	secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests. (b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	c. Opacity	i. Establish a site-specific maximum opacity level	(1) Data from the opacity monitoring system during the PM performance test	(a) You must collect opacity readings every 15 minutes during the entire period of the performance tests. (b) Determine the average hourly opacity reading for each performance test run by computing the hourly averages using all of the 15-minute readings taken during each performance test run. (c) Determine the highest hourly average opacity reading measured during the test run demonstrating compliance with the PM (or TSM) emission limitation.
2. HCl	a. Wet scrubber operating parameters	i. Establish site-specific minimum effluent pH and flow rate operating limits according to §63.7530(b)	(1) Data from the pH and liquid flow-rate monitors and the HCl performance test	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Dry scrubber operating parameters	i. Establish a site-specific minimum sorbent injection rate operating limit according to §63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent	(1) Data from the sorbent injection rate monitors and HCl or mercury performance test	(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average of the three test run averages established

				during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in §63.7575, to determine the required injection rate.
	c. Alternative Maximum SO_2emission rate	i. Establish a site-specific maximum SO_2emission rate operating limit according to §63.7530(b)	(1) Data from SO_2 CEMS and the HCl performance test	(a) You must collect the SO_2 emissions data according to §63.7525(m) during the most recent HCl performance tests. (b) The maximum SO_2emission rate is equal to the highest hourly average SO_2emission rate measured during the most recent HCl performance tests.
3. Mercury	a. Activated carbon injection	i. Establish a site-specific minimum activated carbon injection rate operating limit according to §63.7530(b)	(1) Data from the activated carbon rate monitors and mercury performance test	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction, as defined in §63.7575, to determine the required injection rate.
4. Carbon monoxide for which compliance is demonstrated by a performance test	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to §63.7530(b)	(1) Data from the oxygen analyzer system specified in §63.7525(a)	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests. (b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the lowest hourly average established during the performance test as your minimum operating

				limit.
5. Any pollutant for which compliance is demonstrated by a performance test	a. Boiler or process heater operating load	i. Establish a unit specific limit for maximum operating load according to §63.7520(c)	(1) Data from the operating load monitors or from steam generation monitors	(a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test. (b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test. (c) Determine the highest hourly average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[a] Operating limits must be confirmed or reestablished during performance tests.

[b] If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests. For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

[80 FR 72827, Nov. 20, 2015]

Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance

As stated in §63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
1. Opacity	a. Collecting the opacity monitoring system data according to §63.7525(c) and §63.7535; and
	b. Reducing the opacity monitoring data to 6-minute averages; and
	c. Maintaining daily block average opacity to less than or equal to 10 percent or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation.
2. PM CPMS	a. Collecting the PM CPMS output data according to §63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to §63.7530(b)(4).
3. Fabric Filter Bag Leak Detection Operation	Installing and operating a bag leak detection system according to §63.7525 and operating the fabric filter such that the requirements in §63.7540(a)(7) are met.
4. Wet Scrubber Pressure Drop and Liquid Flow-rate	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§63.7525 and 63.7535; and

	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to §63.7530(b).
5. Wet Scrubber pH	a. Collecting the pH monitoring system data according to §§63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to §63.7530(b).
6. Dry Scrubber Sorbent or Carbon Injection Rate	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in §63.7575.
7. Electrostatic Precipitator Total Secondary Electric Power Input	a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to §63.7530(b).
8. Emission limits using fuel analysis	a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and
	b. Reduce the data to 12-month rolling averages; and
	c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 13 to this subpart.
	d. Calculate the HCI, mercury, and/or TSM emission rate from the boiler or process heater in units of lb/MMBtu using Equation 15 and Equations 17, 18, and/or 19 in §63.7530.
9. Oxygen content	a. Continuously monitor the oxygen content using an oxygen analyzer system according to §63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in §63.7525(a)(7).
	b. Reducing the data to 30-day rolling averages; and
	c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the CO performance test.
10. Boiler or process heater operating load	a. Collecting operating load data or steam generation data every 15 minutes. b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test according to §63.7520(c).
11. SO_2 emissions using SO_2 CEMS	a. Collecting the SO_2 CEMS output data according to §63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average SO_2 CEMS emission rate to a level at or below the highest hourly SO_2 rate measured during the HCl performance test according to §63.7530.

[78 FR 7204, Jan. 31, 2013, as amended at 80 FR 72829, Nov. 20, 2015]

Table 9 to Subpart DDDDD of Part 63—Reporting Requirements

As stated in §63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in §63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in §63.7550(b).
	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	
	c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard for periods of startup and shutdown, during the reporting period, the report must contain the information in §63.7550(d); and	
	d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), or otherwise not operating, the report must contain the information in §63.7550(e)	

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD

As stated in §63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§63.1	Applicability	Yes.
§63.2	Definitions	Yes. Additional terms defined in §63.7575
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities and Circumvention	Yes.
§63.5	Preconstruction Review and Notification Requirements	Yes.
§63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards	Yes.

	and Maintenance Requirements	
§63.6(e)(1)(i)	General duty to minimize emissions.	No. See §63.7500(a)(3) for the general duty requirement.
§63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§63.6(g)	Use of alternative standards	Yes, except §63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2).
§63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See §63.7500(a).
§63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	No. Subpart DDDDD specifies opacity as an operating limit not an emission standard.
§63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§63.6(j)	Presidential exemption.	Yes.
§63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.
§63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at §63.7520(a) to (c).
§63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.
§63.8(c)(1)	Operation and maintenance of CMS	Yes.
§63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See §63.7500(a)(3).
§63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§63.8(c)(1)(iii)	Startup, shutdown, and	No.

	malfunction plans for CMS	
§63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.
§63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§63.8(e)	Performance evaluation of a CMS	Yes.
§63.8(f)	Use of an alternative monitoring method.	Yes.
§63.8(g)	Reduction of monitoring data	Yes.
§63.9	Notification Requirements	Yes.
§63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.
§63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions.
§63.10(b)(2)(iii)	Maintenance records	Yes.
§63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.
§63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.
§63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See §63.7555(d)(7) for recordkeeping of occurrence and duration and §63.7555(d)(8) for actions taken during malfunctions.
§63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.
§63.10(d)(1) and (2)	General reporting requirements	Yes.
§63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§63.10(d)(4)	Progress reports under an	Yes.

	extension of compliance	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See §63.7550(c)(11) for malfunction reporting requirements.
§63.10(e)	Additional reporting requirements for sources with CMS	Yes.
§63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§63.11	Control Device Requirements	No.
§63.12	State Authority and Delegation	Yes.
§63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

Table 11 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis	a. Mercury	8.0E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis	a. Mercury	2.0E-06 lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.

4. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
6. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
7. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
8. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
9. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling	1 hr minimum sampling time.

		average)	
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
12. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
13. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	8.0E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
14. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
15. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
17. Units designed to burn heavy liquid	a. CO	130 ppm by volume on a dry	1 hr minimum sampling

fuel		basis corrected to 3 percent oxygen, 3-run average	time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
18. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
19. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 4 dscm per run.
20. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see §63.14.

[c] An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[80 FR 72831, Nov. 20, 2015]

Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After May 20, 2011, and Before December 23, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	3.5E-06[a] lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO b. Filterable PM (or TSM)	460 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average 3.0E-02 lb per MMBtu of heat	1 hr minimum sampling time. Collect a minimum of 2 dscm per run.

		input; or (4.0E-03 lb per MMBtu of heat input)	
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	260 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO b. Filterable PM (or TSM)	910 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average 2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1 hr minimum sampling time. Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.

	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see §63.14.

[c] An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[80 FR 72834, Nov. 20, 2015]

Table 13 to Subpart DDDDD of Part 63— Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before April 1, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
4. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
6. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat	Collect a minimum of 2 dscm per run.

		input)	
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.*
9. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
13. Units designed to burn liquid fuel	a. HCl	1.2E-03 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.9E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or

			M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
14. Units designed to burn heavy liquid fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
15. Units designed to burn light liquid fuel	a. CO (or CEMS)	130[a] ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 1-day block average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
17. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to §63.7515 if all of the other provision of §63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see §63.14.

[c] An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the carbon monoxide emissions limit be determined using carbon dioxide as a diluent correction in place of

oxygen at 3%. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

[78 FR 7210, Jan. 31, 2013, as amended at 80 FR 72836, Nov. 20, 2015]

CERTIFICATE OF SERVICE

I, Rachele McAuley , hereby certify that a copy of this permit has been mailed by first class mail to Evergreen Packaging, Inc., 5201 Fairfield Road, Pine Bluff, AR, 71601, on this 29th day of September, 2016.

Rachele McAuley, ASIII, Office of Air Quality