

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES
Air Pollution Control Program

PART 70 PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth herein.

Operating Permit Number: OP2017-077
Expiration Date: OCT 17 2022
Installation ID: 007-0040
Project Number: 2012-11-030

Installation Name and Address

Teva Pharmaceuticals USA, Inc.
5000 Snyder Dr.
Mexico, MO 65265
Audrain County

Parent Company's Name and Address

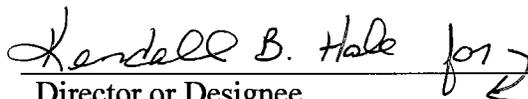
Teva Pharmaceuticals USA, Inc.
425 Privet Road
Horsham PA, 19044

Installation Description:

Teva Pharmaceuticals USA, Inc. produces several pharmaceutical products (bulk antibiotic preparations) and intermediates (needed to manufacture the final antibiotic products) at its plant in Mexico, Missouri. The installation uses a variety of chemicals including solvents classified as VOCs and HAPs in a number of pharmaceutical manufacturing processes to produce its final and intermediate products. These processes typically consist of chemical synthesis steps, followed by product separation, and drying. The installation was initially constructed in 1989. The existing installation is a major source of Methylene Chloride (75-09-2).



Prepared by
Alana L. Hess
Operating Permit Unit



Director or Designee
Department of Natural Resources

OCT 17 2017

Effective Date

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

Teva Pharmaceuticals USA, Inc. produces Amoxicillin, Dicloxicillin, Cephalexin, Cefadroxil, Cefprozil, Cefdinir, and intermediates (needed to manufacture the final antibiotic products) at its plant in Mexico, Missouri. The installation uses a variety of chemicals including solvents classified as VOCs and HAPs in a number of pharmaceutical manufacturing processes to produce its final and intermediate products. These processes typically consist of chemical synthesis steps, followed by product separation, and drying. The installation was initially constructed in 1989. The existing installation is a major source of Methylene Chloride (75-09-2).

The installation is on the list of named installations at 10 CSR 10-6.020(3)(B), Table 2, Item #20 Chemical Process Plants; therefore, fugitive emissions are counted towards major source applicability.

Reported Air Pollutant Emissions, tons per year					
Pollutants	2015	2014	2013	2012	2011
PM ₁₀	0.28	0.23	0.20	0.20	0.24
PM _{2.5}	0.28	0.23	0.20	0.20	0.24
SO _x	0.02	0.02	0.01	0.02	0.02
NO _x	3.50	2.93	2.45	2.49	3.06
VOC	8.31	7.81	9.25	7.63	6.73
CO	0.44	1.78	0.31	0.31	0.39
HAP	1.61	1.43	1.78	1.88	1.93
Methylene Chloride (75-09-2)	0.64	0.75	0.72	0.79	0.88
Toluene (108-88-3)	0.57	0.31	0.57	0.52	0.49
Methanol (67-56-1)	0.32	0.23	0.34	0.28	0.26
Triethylamine (121-44-8)	0.09	0.14	0.16	0.29	0.31
Dimethyl Formamide (68-12-2)	0.0005	0.001	0.001	0.001	-

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation that emits air pollutants and that are identified as having unit-specific emission limitations. The emission sources are also subject to the plant wide emission limitations.

Amoxicillin PMPU			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
R-005 6-APA Slurry Tank	Fixed-Bed Regenerative Carbon Adsorber (APC-018)		Construction Permits: 092002-014 and 0198-034 and MACT GGG
T-002 Mix Tank			
R-001 Mixed Anhydride Reactor			
R-002 Mixed Anhydride Reactor			
R-105 Hydrolysis Vessel/ Phase Separation			
R-107 Crystallization Reactor			
N-001 Centrifuge	Regenerative Thermal Oxidizer (RTO-01)	93% reduction per §63.1254(a)(1)	
N-004 Centrifuge			
N-101 Centrifuge			
N-201 Centrifuge			
T004 600 gallon Mother Liquor Tank			
T027 200 gallon Mother Liquor Tank			
T115 200 gallon Mother Liquor Tank	Fixed Bed Regenerative Carbon Adsorber (APC-018)		
T201 200 gallon Mother Liquor Tank			
R-325 Vacuum Extraction			
R-304 Vacuum Extraction			
T301 Amoxicillin Wastewater Feed Tank to R-306	Packed-Bed Water Scrubber (S-201)		
R-306 Mother Liquor/ Carbon Adsorber Vacuum Strip			
T107 150 gallon HCl Load Tank	None	Does not meet the definition of process vent as undiluted and uncontrolled emissions are less than 50 ppmv HAP	
D-001 Fluid Bed Dryer			
T040/T114 100 gallon NaOH Tank			
PEN Building Equipment Leaks	LDAR	§63.1255	

Methylene Chloride Reclamation (Amoxicillin PMPU Operating Scenario 1)			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
T010 12,000 gallon Spent MeCl ₂ Feed Tank	Environmental Vent Condenser (E-004) and Fixed Bed Regenerative Carbon Adsorber (APC-018)	93% reduction per §63.1254(a)(1)	Construction Permits: 092002-014 and 0198-034 and MACT GGG
V-001 SSP Distillation Column			
V-028 MeCl ₂ Condensate Decanter			
T011 Recovered MeCl ₂ Receiver			
T024 First/Last Cut MeCl ₂ Receiver			
E-002 SSP Primary Condenser			
E-003 SSP Secondary Condenser			
E-004 SSP Environmental Vent Condenser	Fixed Bed Regenerative Carbon Adsorber (APC-018)		

Acetone Reclamation (Amoxicillin PMPU Operating Scenario 2)			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
V-001 SSP Distillation Column	None	Does not meet the definition of process vent as undiluted and uncontrolled emissions are less than 50 ppmv HAP	Construction Permits: 092002-014 and 0198-034 and MACT GGG
V-028 Acetone Condensate Decanter			
T012 Recovered Acetone Receiver			
T013 First Cut Acetone Receiver			
T025 Last Cut Acetone Receiver			
E-002 SSP Primary Condenser			
E-003 SSP Secondary Condenser			

Dicloxicillin PMPU			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
R-101 6-APA Slurry Tank	Fixed Bed Regenerative Carbon Adsorber (APC-018)	93% reduction per §63.1254(a)(1)	MACT GGG
R-102 Diazoyl Chloride Tank			
T003 S2E Solution Tank			
R-004 Crystallization Reactor			
N-001 Centrifuge			
N-004 Centrifuge			
N-201 Centrifuge			
T004 600 gallon Mother Liquor Tank			
T027 200 gallon Mother Liquor Tank			
T201 200 gallon Mother Liquor Tank			
D-001 Fluid Bed Dryer	None	Does not meet the definition of process vent as undiluted and uncontrolled emissions are less than 50 ppmv HAP	
V-101 NaOH Tank			
PEN Building Equipment Leaks	LDAR	§63.1255	

Cephalexin PMPU			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
R-605 Silylation Reactor	Regenerative Thermal Oxidizer (RTO-01)	93% reduction per §63.1254(a)(1)	Construction Permits: 082003-002, 102001-011, and 0989-004; 10/27/2005 No Construction Permit Required Determination; and 3/28/2008 No Construction Permit Required Determination; and MACT GGG
R-601 Condensation Reactor			
R-602 Hydrolysis Reactor/ Phase Separation			
R-604 Crystallization Reactor			
T616 200 gallon Tank			
N-601/N-602 Centrifuges			
R-303 Toluene Wash/ Recovery Vessel			
T-606 HCl Load Tank	Scrubber (Y-606)		
D-601 Fluid Bed Dryer	Scrubber (Y-601) & Regenerative Thermal Oxidizer (RTO-01)	98% reduction per §63.1254(a)(3)	
CEPH Building Equipment Leaks	LDAR	§63.1255	

Toluene Reclamation in Continuous Distillation Column V-852 (Cephalexin PMPU)			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
E-854/855 Toluene Distillation Column Pre-heat Feeders	Vent Condenser E-862 and Regenerative Thermal Oxidizer (RTO-01)	93% reduction per §63.1254(a)(1)	Construction Permit 082003-002 and MACT GGG
V-852 Toluene Distillation Column			
V-843/V-845 6,000 gallon Toluene Still Overheads Feed Tank (2 nd Distillation)			
V-846 Reclaimed Toluene Transfer Vessel			
V-861 Toluene Still Overheads Decanter			
E-853 Toluene Still Primary Condenser			
E-862 Toluene Still Environmental Vent Condenser	Regenerative Thermal Oxidizer (RTO-01)		

Methanol Reclamation in Continuous Distillation Column V-873 (Cephalexin PMPU)			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
E-871 MeOH Distillation Column Pre-heat Feeder	Vent Condenser, E-878, and Regenerative Thermal Oxidizer (RTO-01)	93% reduction per §63.1254(a)(1)	Construction Permit 082003-002 and MACT GGG
V-873 MeOH Distillation Column			
V-876 MeOH Still Reflux Drum			
E-875 MeOH Still Primary Condenser			
E-878 MeOH Still Environmental Vent Condenser	Regenerative Thermal Oxidizer (RTO-01)		

Cefadroxil/Cefprozil PMPU – Operating Scenario 1 Cefadroxil Production			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
R-605 Silylation Reactor	Carbon Canisters (CCANISTERS)	93% reduction per §63.1254(a)(1)	Construction Permits: 082003-002, 102001-011, and 0989-004; 10/27/2005 No Construction Permit Required Determination; and 3/28/2008 No Construction Permit Required Determination; and MACT GGG
R-601 Mixed Anhydride Reactor			
R-602 Phase Separation Reactor			
R-604 Crystallization Reactor	Regenerative Thermal Oxidizer (RTO-01)		
N-601/N-602 Centrifuges			
R-402 Desolvation			
N-501 Centrifuge			
D-501 Vacuum Dryer			
CEPH Building Equipment Leaks	LDAR	§63.1255	

Cefadroxil/Cefprozil PMPU – Operating Scenario 2 Cefprozil Production			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
R-605 Silylation Reactor	Carbon Canisters (CCANISTERS)	93% reduction per §63.1254(a)(1)	Construction Permits: 082003-002, 102001-011, and 0989-004; 10/27/2005 No Construction Permit Required Determination; and 3/28/2008 No Construction Permit Required Determination; and MACT GGG
R-601 Mixed Anhydride Reactor			
R-602 Phase Separation Reactor			
R-604 Crystallization Reactor	Regenerative Thermal Oxidizer (RTO-01)	93% reduction per §63.1254(a)(1)	
N-601/N-602 Centrifuges			
R-402 Desolvation			
N-501 Centrifuge			
D-501 Vacuum Dryer	LDAR	§63.1255	
CEPH Building Equipment Leaks			

Cefdinir PMPU			Applicable Requirement(s)
Equipment List	MACT GGG Control Devices	MACT GGG Standard	
R-602 Condensation Reactor/ Extraction	Carbon Canisters (CCANISTERS)	93% reduction per §63.1254(a)(1)	Construction Permits: 082003-002, 102001-011, and 0989-004; 10/27/2005 No Construction Permit Required Determination; and 3/28/2008 No Construction Permit Required Determination; and MACT GGG
R-604 Hydrolysis/ Crystallization Reactor			
N-501 Centrifuge			
R-501 Carbon Treatment/Filtration	None	Does not meet the definition of process vent as undiluted and uncontrolled emissions are less than 50 ppmv HAP	
R-502 Crystallization			
N-601 Centrifuge			
N-602 Centrifuge			
D-601 Fluid Bed Dryer	LDAR	§63.1255	
CEPH Building Equipment Leaks			

Emission Source	Description	Applicable Requirement(s)
Boilers	(2) 8.4 MMBtu/hr Boilers - natural gas with fuel oil #2 backup	10 CSR 10-6.220, MACT DDDDD, and 10 CSR 10-6.261
Boiler	(1) 16.3 MMBtu/hr Boiler - natural gas with fuel oil #2 backup	NSPS Dc and MACT DDDDD
T825	30,000 gallon Spent Methanol or Waste DMF Tank Control Equipment: Scrubber (Y-801)	NSPS Kb and MACT GGG
1231	244 HP Diesel Fire Water Pump, 0.62 MMBtu/hr	MACT ZZZZ and 10 CSR 10-6.261
G003	900 HP Diesel Emergency Generator, 2.29 MMBtu/hr	Condition Exemption to MACT ZZZZ and 10 CSR 10-6.261
WWTP	Open Biological Wastewater Treatment Plant	MACT GGG
T801	10,000 gallon Methylene Chloride Control Equipment: carbon canister (CCANISTERS)	90% reduction per §63.1253(b)(1)
T008	10,000 gallon Methylene Chloride Tank Control Equipment: Fixed Bed Regenerative Carbon	90% reduction per §63.1253(b)(1)

	Adsorber (APC-018)	
T812	15,000 gallon Methanol or Acetone Tank Control Equipment: Scrubber (Y-801)	90% reduction per §63.1253(b)(1)
T009	12,000 gallon Spent Acetone Feed Tank	Does not meet the requirements of §63.1253(a)(1) as the maximum true vapor pressure of total HAP is less than 13.1 kPa

EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance. These emission sources are subject to the plant wide emission limitations.

Emission Source	Description
NatGas	Natural Gas Space Heaters (18.34 MMBtu/hr total)
T007	12,000 gallon Prime Acetone Tank
T030	6,000 gallon Triethylamine Tank
T328	12,000 gallon HDMS Tank
T802	10,700 gallon HCl (31%) Tank
T804	13,000 gallon NaOH Tank
T807	10,000 gallon High Strength Wastewater Tank
T808	10,000 gallon Dimethylacetamide Tank
T810	20,000 gallon High Strength Wastewater Tank
T813	10,000 gallon Sulfuric Acid Byproduct Tank
T814	39,000 gallon Unwashed Toluene Tank
T815	26,000 gallon Unwashed Toluene Tank
T818	10,000 gallon Methanol Tank
T819	10,000 gallon HMDSO/Toluene Tank
T820	20,000 gallon Toluene Tank
T822	20,000 gallon Dimethylformamide Tank
T823	20,000 gallon Sulfuric Acid Tank
T824	30,000 gallon Waste Toluene Tank
T826	30,000 gallon Methylene Chloride Still Bottoms Tank
T827	30,000 gallon Waste Methylene Chloride Tank
T844	7,500 gallon Toluene Reclaim Tank
T1201	5,040 gallon Fuel Oil Tank
T1202	300 gallon Fuel Oil Day Tank
T1230	300 gallon Diesel Day Tank
T1401	1,000 gallon Fuel Oil Tank
T1403	20,000 gallon Empty Tank
TG003	500 gallon Diesel Day Tank

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

PERMIT CONDITION PW001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart GGG – National Emission Standards for Pharmaceuticals Production

General Standards:

1. The permittee shall control HAP emissions to the level specified in §63.1252. Initial compliance with the emission limits is demonstrated in accordance with the provisions of §63.1257, and continuous compliance is demonstrated in accordance with the provisions of §63.1258. [§63.1252]
2. Opening of a safety device. Opening of a safety device, as defined in §63.1251, is allowed at any time conditions require it to do so to avoid unsafe conditions. [§63.1252(a)]
3. Closed-vent systems. Each closed-vent system that contains bypass lines that could divert a vent stream away from a control device used to comply with the requirements in §§63.1253, 63.1254, and 63.1256 shall comply with the requirements of Table 4 to MACT GGG and §63.1252(b)(1) or (2). Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, rupture disks and pressure relief valves needed for safety purposes are not subject to this paragraph. [§63.1252(b)]
 - a) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be maintained as specified in §63.1259(i)(6)(i). The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or [§63.1252(b)(1)]
 - b) Secure the bypass line valve in the closed position with a car seal or lock and key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. Records shall be maintained as specified in §63.1259(i)(6)(ii). [§63.1252(b)(2)]
4. Heat exchange systems. Except as provided in §63.1252(c)(2), the permittee shall comply with the requirements in §63.1252(c)(1) for heat exchange systems that cool process equipment or materials used in pharmaceutical manufacturing operations. [§63.1252(c)]
 - a) The heat exchange system shall be treated according to the provisions of §63.104, except that the monitoring frequency shall be no less than quarterly. [§63.1252(c)(1)]
 - b) For identifying leaking equipment from heat exchange systems on equipment which meet current good manufacturing practice (CGMP) requirements of 21 CFR Part 211, the permittee may elect to use the physical integrity of the reactor as the surrogate indicator of heat exchange system leaks around the reactor. [§63.1252(c)(2)]
5. Emissions averaging provisions. Except as specified in §63.1252(d)(2) through (4), for storage tanks or processes subject to the provisions of §§63.1253 and 63.1254, the permittee may choose to comply by using emissions averaging requirements specified in §63.1257(g) or (h) for any storage tank or process. [§63.1252(d)]
 - a) Only emission sources subject to the requirements of §63.1253(b)(1) or (c)(1)(i) or §63.1254(a)(1)(i) may be included in any averaging group. [§63.1252(d)(2)]

- b) Processes which have been permanently shutdown or storage tanks permanently taken out of HAP service may not be included in any averaging group. [§63.1252(d)(3)]
 - c) Processes and storage tanks already controlled on or before November 15, 1990 may not be included in an emissions averaging group, except where the level of control is increased after November 15, 1990. In these cases, the uncontrolled emissions shall be the controlled emissions as calculated on November 15, 1990 for the purpose of determining the uncontrolled emissions as specified in §63.1257(g) and (h). [§63.1252(d)(4)]
 - d) Not more than 20 processes subject to §63.1254(a)(1)(i), and 20 storage tanks subject to §63.1253(b)(1) or (c)(1)(i) at an affected source may be included in an emissions averaging group. [§63.1252(d)(6)]
 - e) Compliance with the emission standards in §63.1253 shall be satisfied when the annual percent reduction efficiency is greater than or equal to 90 percent for those tanks meeting the criteria of §63.1253(a)(1) and 95 percent for those tanks meeting the criteria of §63.1253(a)(2), as demonstrated using the test methods and compliance procedures specified in §63.1257(g). [§63.1252(d)(7)]
 - f) Compliance with the emission standards in §63.1254(a)(1)(i) shall be satisfied when the annual percent reduction efficiency is greater than or equal to 93 percent, as demonstrated using the test methods and compliance procedures specified in §63.1257(h). [§63.1252(d)(8)]
6. Pollution prevention alternative. Except as provided in §63.1252(e)(1), the permittee may choose to meet the pollution prevention alternative requirement specified in either §63.1252(e)(2) or (3) for any PMPU or for any situation described in §63.1252(e)(4), in lieu of the requirements specified in §§63.1253, 63.1254, 63.1255, and 63.1256. Compliance with §63.1252(e)(2) and (3) shall be demonstrated through the procedures in §63.1257(f). Any PMPU for which the permittee seeks to comply by using the pollution prevention alternative shall begin with the same starting material(s) and end with the same product(s). The permittee may not comply with the pollution prevention alternative by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). [§63.1252(e)]
- a) The HAP that are generated in the PMPU that are not part of the production-indexed consumption factor must be controlled according to the requirements of §§63.1253, 63.1254, 63.1255, and 63.1256. The hydrogen halides that are generated as a result of combustion control of emissions shall be controlled according to the requirements of §63.1252(g)(1). [§63.1252(e)(1)]
 - b) The production-indexed HAP consumption factor (kg HAP consumed/kg produced) shall be reduced by at least 75 percent from a three-year average baseline established no earlier than the 1987 calendar year, or for the time period from startup of the process until the present in which the PMPU was operational and data are available, whichever is the lesser time period. If a time period less than three years is used to set the baseline, the data must represent at least one year's worth of data. For any reduction in the HAP factor achieved by reducing a HAP that is also a VOC, an equivalent reduction in the VOC factor is also required. For any reduction in the HAP factor that is achieved by reducing a HAP that is not a VOC, the VOC factor may not be increased. [§63.1252(e)(2)]
 - c) Both requirements specified in §63.1252(e)(3)(i) and (ii) are met. [§63.1252(e)(3)]
 - i) The production-indexed HAP consumption factor (kg HAP consumed/kg produced) shall be reduced by at least 50 percent from a three-year average baseline established no earlier than the 1987 calendar year, or for the time period from startup of the process until the present in which the PMPU was operational and data are available, whichever is less. If a time period less than three years is used to set the baseline, the data must represent at least one year's

- worth of data. For any reduction in the HAP factor achieved by reducing a HAP that is also a VOC, an equivalent reduction in the VOC factor is also required. For any reduction in the HAP factor that is achieved by reducing a HAP that is not a VOC, the VOC factor may not be increased. [§63.1252(e)(3)(i)]
- ii) The total PMPU HAP emissions shall be reduced by an amount, in kg/yr, that, when divided by the annual production rate, in kg/yr, and added to the reduction of the production-indexed HAP consumption factor, in kg/kg, yields a value of at least 75 percent of the average baseline HAP production-indexed consumption factor established according to §63.1252(e)(3)(i) according to the equation provided in §63.1257(f)(2)(ii)(A). The total PMPU VOC emissions shall be reduced by an amount calculated according to the equation provided in §63.1257(f)(2)(ii)(B). The annual reduction in HAP and VOC air emissions shall be due to the use of the following control devices: [§63.1252(e)(3)(ii)]
 - (1) Combustion control devices such as incinerators. [§63.1252(e)(3)(ii)(A)]
 - (2) Control devices such as condensers and carbon adsorbers whose recovered product is destroyed or shipped offsite for destruction. [§63.1252(e)(3)(ii)(B)]
 - (3) Any control device that does not ultimately allow for recycling of material back to the PMPU. [§63.1252(e)(3)(ii)(C)]
 - (4) Any control device for which the permittee can demonstrate that the use of the device in controlling HAP emissions will have no effect on the production-indexed consumption factor for the PMPU. [§63.1252(e)(3)(ii)(D)]
 - iii) The permittee may comply with the requirements in either §63.1252(e)(2) or (3) for a series of processes, including situations where multiple processes are merged, subject to the following conditions: [§63.1252(e)(4)]
 - (1) The baseline period shall be a single year beginning no earlier than the 1992 calendar year. [§63.1252(e)(4)(i)]
 - (2) The term “PMPU” shall have the meaning provided in §63.1251 except that the baseline and modified PMPU may include multiple processes (i.e., precursors, active ingredients, and final dosage form) if the permittee demonstrates to the satisfaction of the Director that the multiple processes were merged after the baseline period into an existing process or processes. [§63.1252(e)(4)(ii)]
 - (3) Nondedicated formulation and solvent recovery processes may not be merged with any other processes. [§63.1252(e)(4)(iii)]
 - d) Control requirements for certain liquid streams in open systems within a PMPU. [§63.1252(f)]
 - i) The permittee shall comply with the provisions of Table 5 of MACT GGG, for each item of equipment meeting all the criteria specified in §63.1252(f)(2) through (4) and either §63.1252(f)(5)(i) or (ii). [§63.1252(f)(1)]
 - ii) The item of equipment is of a type identified in Table 5 of MACT GGG; [§63.1252(f)(2)]
 - iii) The item of equipment is part of a PMPU, as defined in §63.1251; [§63.1252(f)(3)]
 - iv) The item of equipment is controlled less stringently than in Table 5 of MACT GGG and the item of equipment is not otherwise exempt from controls by the provisions of MACT GGG or MACT A; and [§63.1252(f)(4)]
 - v) The item of equipment: [§63.1252(f)(5)]
 - (1) Is a drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with an annual average concentration greater than or equal to 1,300 ppmw of partially soluble HAP compounds; or an annual average concentration greater than or equal to 5,200 ppmw of partially soluble and/or soluble HAP compounds. The annual

- average concentration shall be determined according to the procedures in §63.1257(e)(1)(ii). [§63.1252(f)(5)(i)]
- (2) Is a tank that receives one or more streams that contain water with an annual average concentration greater than or equal to 1,300 ppmw of partially soluble HAP compounds, or greater than or equal to 5,200 ppmw of total partially soluble and/or soluble HAP compounds. The permittee shall determine the average concentration of the stream at the inlet to the tank and according to the procedures in §63.1257(e)(1)(ii). [§63.1252(f)(5)(ii)]
- e) Control requirements for halogenated vent streams that are controlled by combustion devices. If a combustion device is used to comply with the provisions of §§63.1253 (storage tanks), 63.1254 (process vents), 63.1256(h) (wastewater vent streams) for a halogenated vent stream, then the vent stream shall be ducted to a halogen reduction device such as, but not limited to, a scrubber, before it is discharged to the atmosphere. The halogen reduction device must reduce emissions by the amounts specified in either §63.1252(g)(1) or (2). [§63.1252(g)]
- i) A halogen reduction device after the combustion control device shall reduce overall emissions of hydrogen halides and halogens, as defined in §63.1251, by 95 percent or to a concentration less than or equal to 20 ppmv. [§63.1252(g)(1)]
- ii) A halogen reduction device located before the combustion control device shall reduce the halogen atom content of the vent stream to a concentration less than or equal to 20 ppmv. [§63.1252(g)(2)]
- f) Planned routine maintenance for centralized combustion control devices. The permittee may operate non-dedicated PMPU's during periods of planned routine maintenance for centralized combustion control device (CCCD) in accordance with the provisions specified in §63.1252(h)(1) through (6). [§63.1252(h)]
- i) For equipment leaks and wastewater emissions that normally are controlled by the CCCD, if any, the permittee shall continue to comply with the requirements in §§63.1255(b)(4)(ii) and 63.1256(h), respectively, using other control devices during the planned routine maintenance period for the CCCD. [§63.1252(h)(1)]
- ii) During the planned routine maintenance period, the permittee shall route emissions from process vents with organic HAP emissions greater than 15 pounds per day (lb/day) through a closed-vent system to a condenser that meets the conditions specified in §63.1252(h)(2)(i) through (iii). [§63.1252(h)(2)]
- (1) The outlet gas temperature shall be less than -50°C (-58°F) when the emission stream contains organic HAP with a partial pressure greater than 20 kPa (2.9 psia). [§63.1252(h)(2)(i)]
- (2) The outlet gas temperature shall be less than -5°C (23°F) when the emission stream contains organic HAP with a partial pressure less than or equal to 20 kPa (2.9 psia). [§63.1252(h)(2)(ii)]
- (3) The HAP partial pressures in §63.1252(h)(2)(i) and (ii) shall be determined at 25°C . [§63.1252(h)(2)(iii)]
- iii) The permittee shall route HCl emissions from process vents with HCl emissions greater than 15 lb/day through a closed-vent system to a caustic scrubber, and the pH of the scrubber effluent shall be maintained at or above 9. [§63.1252(h)(3)]
- iv) For the purposes of the emission calculations required in §63.1252(h)(2) and (3), the term "process vent" shall mean each vent from a unit operation. The emission calculation shall not be performed on the aggregated emission stream from multiple unit operations that are manifolded together into a common header. Once an affected process vent has been

- controlled in accordance with §63.1252, it is no longer subject to the requirements of §63.1252 or §63.1254 during the routine maintenance period. [§63.1252(h)(4)]
- v) The total period of planned routine maintenance, during which non-dedicated PMPU's that are normally controlled by the CCCD continue to operate, and process vent emissions are controlled as specified in §63.1252(h)(2) and (3), shall not exceed 240 hours in any 365-day period. [§63.1252(h)(5)]
 - vi) While being controlled as specified in §63.1252(h)(2) and (3), the process vents may not be used in emissions averaging. [§63.1252(h)(6)]

Table 4 to MACT GGG – Monitoring Requirements for Control Devices¹

Control Device	Monitoring Equipment Required	Parameters to be Monitored	Frequency
All control devices	Flow indicator installed at all bypass lines to the atmosphere and equipped with continuous recorder <u>or</u>	Presence of flow diverted from the control device to the atmosphere <u>or</u>	Hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during each hour.
	Valves sealed closed with car-seal or lock-and-key configuration	Monthly inspection of sealed valves	Monthly.
Scrubber	Liquid flow rate or pressure drop mounting device.	Liquid flow rate into or out of the scrubber or the pressure drop across the scrubber	Every 15 minutes.
Thermal incinerator	Temperature monitoring device installed in firebox or in ductwork immediately downstream of firebox ²	Firebox temperature	Every 15 minutes.
Carbon adsorber (nonregenerative)	None	Operating time since last replacement	N/A.
Carbon adsorber (regenerative)	Stream flow monitoring device, <u>and</u>	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s)	For each regeneration cycle, record the total regeneration stream mass and volumetric flow.
		Temperature of carbon bed after regeneration	For each regeneration cycle, record the maximum carbon bed-temperature.
	Carbon bed temperature monitoring device	Temperature of carbon bed within 15 minutes of completing any cooling cycle(s)	Within 15 minutes of completing any cooling cycle, record the carbon bed temperature.
		Operating time since end of last regeneration	Operating time to be based on worst-case conditions.

¹ As an alternative to the monitoring requirements specified in Table 4 to MACT GGG, the permittee may use a CEMS meeting the requirements of Performance Specifications 8 or 9 of NSPS Appendix B to monitor TOC every 15 minutes.

² Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

Control Device	Monitoring Equipment Required	Parameters to be Monitored	Frequency
		Check for bed poisoning	Yearly. ³

Table 5 to MACT GGG – Control Requirements for Items of Equipment That Meet the Criteria of §63.1252(f)

Item of Equipment	Control Equipment ⁴
Drain or drain hub	Tightly fitting solid cover (TFSC); <i>or</i>
	TFSC with a vent to either a process or to a control device meeting the requirements of §63.1256(h)(2); <i>or</i>
	Water seal with submerged discharge or barrier to protect discharge from wind.
Manhole ⁵	TFSC; <i>or</i>
	TFSC with a vent to either a process or to a control device meeting the requirements of §63.1256(h)(2); <i>or</i>
	If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
Lift station	TFSC; <i>or</i>
	TFSC with a vent to either a process or to a control device meeting the requirements of §63.1256(h)(2); <i>or</i>
	If the lift station is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter. The lift station shall be level controlled to minimize changes in the liquid level.
Trench	TFSC; <i>or</i>
	TFSC with a vent to either a process or to a control device meeting the requirements of §63.1256(h)(2); <i>or</i>
	If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
Pipe	Each pipe shall have no visible gaps in joints, seals, or other emission interfaces.
Oil/Water separator	Equip with a fixed roof and route vapors to a process or equip with a closed-vent system that routes vapors to a control device meeting the requirements of §63.1256(h)(2); <i>or</i>
	Equip with a floating roof that meets the equipment specifications of §60.693(a)(1)(i), (1)(ii), (2), (3), and (4).
Tank	Maintain a fixed roof and consider vents as process vents. ⁶

³ Where EPA’s April 10, 2014 letter to Frontier Refining LLC (Clean Air Act Applicability Determination Index Control Number M140008) states: “For annual requirements, we usually accept an interval between events to be any time between 11 and 13 months.”

⁴ Where a tightly fitting solid cover is required, it shall be maintained with no visible gaps or openings, except during periods of sampling, inspection, or maintenance.

⁵ Manhole includes sumps and other points of access to a conveyance system.

⁶ A fixed roof may have openings necessary for proper venting of the tank, such as pressure/vacuum vent, j-pipe vent.

Storage Tank Standards:

1. Except as provided in §63.1253(d), (e), and (f), a storage tank meeting the criteria of §63.1253(a)(1) is subject to the requirements of §63.1253(b). Except as provided in §63.1253(d), (e), and (f), a storage tank meeting the criteria of §63.1253(a)(2) is subject to the requirements of §63.1253(c). Compliance with the provisions of §63.1253(b) and (c) is demonstrated using the initial compliance procedures in §63.1257(c) and the monitoring requirements in §63.1258. [§63.1253(a)]
 - a) A storage tank with a design capacity greater than or equal to 38 m³ but less than 75 m³ storing a liquid for which the maximum true vapor pressure of total HAP is greater than or equal to 13.1 kPa. [§63.1253(a)(1)]
 - b) A storage tank with a design capacity greater than or equal to 75 m³ storing a liquid for which the maximum true vapor pressure of total HAP is greater than or equal to 13.1 kPa. [§63.1253(a)(2)]
2. The permittee shall equip the affected storage tank with either a fixed roof with internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, or a closed-vent system meeting the conditions of §63.1252(b) with a control device that meets any of the following conditions: [§63.1253(b)]
 - a) Reduces inlet emissions of total HAP by 90 percent by weight or greater; [§63.1253(b)(1)]
 - b) Reduces emissions to outlet concentrations less than or equal to 20 ppmv as TOC and less than or equal to 20 ppmv as hydrogen halides and halogens; [§63.1253(b)(2)]
 - c) Is an enclosed combustion device that provides a minimum residence time of 0.5 seconds at a minimum temperature of 760°C; [§63.1253(b)(3)]
 - d) Is a control device specified in §63.1257(a)(4). [§63.1253(b)(5)]
3. The permittee shall equip the affected storage tank with either a fixed roof with internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, or a closed-vent system meeting the conditions of §63.1252(b) with a control device that meets any of the following conditions: [§63.1253(c)]
 - a) Reduces inlet emissions of total HAP as specified in §63.1253(c)(1)(i) or (ii): [§63.1253(c)(1)]
 - i) By 95 percent by weight or greater; or [§63.1253(c)(1)(i)]
 - ii) If the permittee can demonstrate that a control device installed on a storage tank on or before April 2, 1997 is designed to reduce inlet emissions of total HAP by greater than or equal to 90 percent by weight but less than 95 percent by weight, then the control device is required to be operated to reduce inlet emissions of total HAP by 90 percent or greater. [§63.1253(c)(1)(ii)]
 - b) Reduces emissions to outlet concentrations less than or equal to 20 ppmv as TOC and less than or equal to 20 ppmv as hydrogen halides and halogens; [§63.1253(c)(2)]
 - c) Is an enclosed combustion device that provides a minimum residence time of 0.5 seconds at a minimum temperature of 760°C; [§63.1253(c)(3)]
 - d) Is a control device specified in §63.1257(a)(4). [§63.1253(c)(5)]
4. As an alternative standard, the permittee may comply with the storage tank standards by routing storage tank vents to a combustion control device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less, and an outlet concentration of hydrogen halides and halogens of 20 ppmv or less. If the permittee is routing emissions to a noncombustion control device, it must achieve an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 50 ppmv or less, and an outlet concentration of hydrogen halides and halogens of 50 ppmv or less. Compliance with the outlet concentrations shall be determined by the initial compliance procedures of §63.1257(c)(4) and the continuous emission monitoring requirements of §63.1258(b)(5). [§63.1253(d)]

5. Planned routine maintenance. The specifications and requirements in §63.1253(b) through (d) for control devices do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of the control devices (including CCCD subject to §63.1252(h)), during which the control device does not meet the specifications of §63.1253(b) through (d), as applicable, shall not exceed 240 hours in any 365-day period. The permittee may submit an application to the Director requesting an extension of this time limit to a total of 360 hours in any 365-day period. The application shall explain why the extension is needed, it shall specify that no material will be added to the storage tank between the time the 240-hour limit is exceeded and the control device is again operational, and it shall be submitted at least 60 days before the 240-hour limit will be exceeded. [§63.1253(e)]
6. Vapor balancing alternative. As an alternative to the requirements in §63.1253(b) and (c), the permittee may implement vapor balancing in accordance with §63.1253(f)(1) through (7). [§63.1253(f)]
 - a) The vapor balancing system shall be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the railcar or tank truck from which the storage tank is filled. [§63.1253(f)(1)]
 - b) Tank trucks and railcars shall have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR Part 180 for tank trucks and 49 CFR 173.31 for railcars. [§63.1253(f)(2)]
 - c) Hazardous air pollutants shall only be unloaded from tank trucks or railcars when vapor collection systems are connected to the storage tank's vapor collection system. [§63.1253(f)(3)]
 - d) No pressure relief device on the storage tank, or on the railcar, or tank truck shall open during loading or as a result of diurnal temperature changes (breathing losses). [§63.1253(f)(4)]
 - e) Pressure relief devices on affected storage tanks shall be set to no less than 2.5 psig at all times to prevent breathing losses. The permittee shall record the setting as specified in §63.1259(b)(12) and comply with the requirements for each pressure relief valve in §63.1253(f)(5)(i) through (iii): [§63.1253(f)(5)]
 - i) The pressure relief valve shall be monitored quarterly using the method described in §63.180(b). [§63.1253(f)(5)(i)]
 - ii) An instrument reading of 500 ppmv or greater defines a leak. [§63.1253(f)(5)(ii)]
 - iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than five days after it is detected, and the permittee shall comply with the recordkeeping requirements of §63.1255(g)(4)(i) through (iv). [§63.1253(f)(5)(iii)]
 - f) Railcars or tank trucks that deliver HAP to an affected storage tank shall be reloaded or cleaned at a facility that utilizes one of the control techniques in §63.1253(f)(6)(i) through (ii): [§63.1253(f)(6)]
 - i) The railcar or tank truck shall be connected to a closed-vent system with a control device that reduces inlet emissions of HAP by 90 percent by weight or greater; or [§63.1253(f)(6)(i)]
 - ii) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the tank truck or railcar during reloading must be used to route the collected HAP vapor to the storage tank from which the liquid being transferred originated. [§63.1253(f)(6)(ii)]
 - iii) The owner or operator of the facility where the railcar or tank truck is reloaded or cleaned shall comply with the requirements in §63.1253(f)(7)(i) through (iii): [§63.1253(f)(7)]
 - (1) Submit to the permittee and to the Director a written certification that the reloading or cleaning facility will meet the requirements of §63.1253. The certifying entity may

- revoke the written certification by sending a written statement to the permittee giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this paragraph. [§63.1253(f)(7)(i)]
- (2) If complying with §63.1253(f)(6)(i), demonstrate initial compliance in accordance with §63.1257(c), demonstrate continuous compliance in accordance with §63.1258, keep records as specified in §63.1259, and prepare reports as specified in §63.1260. [§63.1253(f)(7)(ii)]
- (3) If complying with §63.1253(f)(6)(ii), keep records of: [§63.1253(f)(7)(iii)]
- (a) The equipment to be used and the procedures to be followed when reloading the railcar or tank truck and displacing vapors to the storage tank from which the liquid originates, and [§63.1253(f)(7)(iii)(A)]
- (b) Each time the vapor balancing system is used to comply with §63.1253(f)(6)(ii). [§63.1253(f)(7)(iii)(B)]

Process Vent Standards:

1. Existing sources. For each process, the permittee shall comply with the requirements in §63.1254(a)(1) and (3) or §63.1254(a)(2) and (3). Initial compliance with the required emission limits or reductions in §63.1254(a)(1) through (3) is demonstrated in accordance with the initial compliance procedures described in §63.1257(d), and continuous compliance is demonstrated in accordance with the monitoring requirements described in §63.1258. [§63.1254(a)]
- a) Process-based emission reduction requirement. [§63.1254(a)(1)]
- i) Uncontrolled HAP emissions from the sum of all process vents within a process that are not subject to the requirements of §63.1254(a)(3) shall be reduced by 93 percent or greater by weight, or as specified in §63.1254(a)(1)(ii). Notification of changes in the compliance method shall be reported according to the procedures in §63.1260(h). [§63.1254(a)(1)(i)]
- ii) Any one or more vents within a process may be controlled in accordance with any of the procedures in §63.1254(a)(1)(ii)(A) through (D). All other vents within the process shall be controlled as specified in §63.1254(a)(1)(i). [§63.1254(a)(1)(ii)]
- (1) To outlet concentrations less than or equal to 20 ppmv as TOC and less than or equal to 20 ppmv as hydrogen halides and halogens; [§63.1254(a)(1)(ii)(A)]
- (2) By a control device specified in §63.1257(a)(4); or [§63.1254(a)(1)(ii)(C)]
- (3) In accordance with the alternative standard specified in §63.1254(c). [§63.1254(a)(1)(ii)(D)]
- b) Process-based annual mass limit. [§63.1254(a)(2)]
- i) Actual HAP emissions from the sum of all process vents within a process shall not exceed 900 kg in any 365-day period. [§63.1254(a)(2)(i)]
- ii) Actual HAP emissions from the sum of all process vents within processes complying with §63.1254(a)(2)(i) are limited to a maximum of 1,800 kg in any 365-day period. [§63.1254(a)(2)(ii)]
- iii) Emissions from vents that are subject to the requirements of §63.1254(a)(3) and emissions from vents that are controlled in accordance with the procedures in §63.1254(c) may be excluded from the sums calculated in §63.1254(a)(2)(i) and (ii). [§63.1254(a)(2)(iii)]
- iv) The permittee may switch from compliance with §63.1254(a)(2) to compliance with §63.1254(a)(1) only after at least one year of operation in compliance with §63.1254(a)(2). Notification of such a change in the compliance method shall be reported according to the procedures in §63.1260(h). [§63.1254(a)(2)(iv)]
- c) Individual vent emission reduction requirements. [§63.1254(a)(3)]

- i) Except as provided in §63.1254(a)(3)(ii), uncontrolled HAP emissions from a process vent shall be reduced by 98 percent or in accordance with any of the procedures in §63.1254(a)(1)(ii)(A) through (D) if the uncontrolled HAP emissions from the vent exceed 25 tons per year, and the flow-weighted average flowrate (FR_a) calculated using Equation 1 of MACT GGG is less than or equal to the flowrate index (FRI) calculated using Equation 2 of MACT GGG.

$$FR_a = \frac{\sum_{i=1}^n (D_i)(FR_i)}{\sum_{i=1}^n (D_i)} \quad \text{Equation 1}$$

$$FRI = 0.02 \times (HL) - 1,000 \quad \text{Equation 2}$$

Where:

FR_a = flow-weighted average flowrate for the vent, scfm

D_i = duration of each emission event, min

FR_i = flowrate of each emission event, scfm

n = number of emission events

FRI = flowrate index, scfm

HL = annual uncontrolled HAP emissions, lb/yr, as defined in §63.1251 [§63.1254(a)(3)(i)]

- ii) Grandfathering provisions. As an alternative to the requirements in §63.1254(a)(3)(i), the permittee may comply with the provisions in §63.1254(a)(3)(ii)(A), (B), or (C), if applicable. [§63.1254(a)(3)(ii)]
- (1) Control device operation. If the permittee can demonstrate that a process vent is controlled by a control device meeting the criteria specified in §63.1254(a)(3)(ii)(A)(1), then the control device is required to be operated according to §63.1254(a)(3)(ii)(A)(2), (3), and (4): [§63.1254(a)(3)(ii)(A)]
- (a) The control device was installed on any process vent that met the conditions of §63.1254(a)(3)(i) on or before April 2, 1997, and was operated to reduce uncontrolled emissions of total HAP by greater than or equal to 93 percent by weight, but less than 98 percent by weight; [§63.1254(a)(3)(ii)(A)(1)]
- (b) The device shall be operated to reduce inlet emissions of total HAP by 93 percent or by the percent reduction specified for that control device in any preconstruction permit issued pursuant to regulations approved or promulgated through rulemaking under Title I (including Parts C or D) of the Clean Air Act, whichever is greater; [§63.1254(a)(3)(ii)(A)(2)]
- (c) The device shall be replaced or upgraded to achieve at least 98 percent reduction of HAP or meet any of the conditions specified in §63.1254(a)(1)(ii)(A) through (D) upon reconstruction or replacement. [§63.1254(a)(3)(ii)(A)(3)]
- (d) The device shall be replaced or upgraded to achieve at least 98 percent reduction of HAP or meet any of the conditions specified in §63.1254(a)(1)(ii)(A) through (D) by April 2, 2007, or 15 years after issuance of the preconstruction permit, whichever is later. [§63.1254(a)(3)(ii)(A)(4)]
- (2) Process operations. If a process meets all of the conditions specified in §63.1254(a)(3)(ii)(B)(1) through (3), the required level of control for the process is the level that was achieved on or before April 2, 1997. This level of control is demonstrated using the same procedures that are used to demonstrate compliance with §63.1254(a)(1). [§63.1254(a)(3)(ii)(B)]
- (a) At least one vent in the process met the conditions of §63.1254(a)(3)(i) on or before April 2, 1997; and [§63.1254(a)(3)(ii)(B)(1)]

- (b) The overall control for the process on or before April 2, 1997 was greater than or equal to 93 percent by weight, but less than 98 percent by weight; and [§63.1254(a)(3)(ii)(B)(2)]
- (c) The production-indexed HAP consumption factor for the 12-month period in which the process was operated prior to the compliance date is less than one-half of the three-year average baseline value established no earlier than the 1987 through 1989 calendar years. [§63.1254(a)(3)(ii)(B)(3)]
- (3) Hydrogenation vents. Processes meeting the conditions of §63.1254(a)(3)(ii)(C)(1) through (3) are required to be operated to maintain the level of control achieved on or before April 2, 1997. For all other processes meeting the conditions of §63.1254(a)(3)(ii)(C)(3), uncontrolled HAP emissions from the sum of all process vents within the process shall be reduced by 95 percent or greater by weight. [§63.1254(a)(3)(ii)(C)]
 - (a) Processes containing a process vent that met the conditions of §63.1254(a)(3)(i) on or before April 2, 1997; and [§63.1254(a)(3)(ii)(C)(1)]
 - (b) Processes that are controlled to greater than or equal to 93 percent by weight, but less than 98 percent by weight; and [§63.1254(a)(3)(ii)(C)(2)]
 - (c) Processes with a hydrogenation vent that, in conjunction with all other process vents from the process that do not meet the conditions of §63.1254(a)(3)(i), cannot meet the requirements of §63.1254(a)(1) or (2). [§63.1254(a)(3)(ii)(C)(3)]
- d) Planned routine maintenance. For each PMPU that is controlled with a CCCD, the permittee shall comply with the provisions specified in either §63.1254(a)(4)(i), (ii), or (iii) during periods of planned routine maintenance of the CCCD. The permittee is not required to comply with the same provision for all of the PMPU's controlled by the CCCD. [§63.1254(a)(4)]
 - i) Shutdown the affected process. [§63.1254(a)(4)(i)]
 - ii) Comply with the requirements of §63.1254(a)(1) through (3) by using other means. [§63.1254(a)(4)(ii)]
 - iii) For a non-dedicated PMPU, implement the procedures described in §63.1254(a)(4)(iii)(A) through (C) for those process vents that are normally controlled by the CCCD. This option is not available for process vents from dedicated PMPU's. [§63.1254(a)(4)(iii)]
 - (1) If the permittee uses a CCCD to comply with the 93 percent reduction requirement in §63.1254(a)(1)(i) or (ii), the outlet concentration limit in §63.1254(a)(1)(ii)(A), the alternative standard as specified in §63.1254(a)(1)(ii)(D) and (c), or the annual mass limit in §63.1254(a)(2), implement the provisions in §63.1252(h) during planned routine maintenance of the CCCD. [§63.1254(a)(4)(iii)(A)]
 - (2) If the permittee reduces HAP emissions from process vents by using a CCCD that is also a control device specified in §63.1257(a)(4), implement the provisions in §63.1252(h) during planned routine maintenance of the CCCD. [§63.1254(a)(4)(iii)(B)]
 - (3) If the permittee uses a CCCD to reduce emissions from a process vent subject to §63.1254(a)(3), implement the planned routine maintenance provisions in §63.1252(h) for that vent only if the reason the planned routine maintenance is needed, and the reason it cannot be performed at a time when the vent subject to §63.1254(a)(3) is not operating, has been described in the Notification of Compliance Status Report or a periodic report submitted before the planned routine maintenance event. [§63.1254(a)(4)(iii)(C)]
- 2. New sources. [§63.1254(b)]
 - a) Except as provided in §63.1254(b)(2), uncontrolled HAP emissions from the sum of all process vents within a process at a new affected source shall be reduced by 98 percent or greater by

- weight or controlled in accordance with any of requirements of §63.1254(a)(1)(ii)(A) through (D). Initial compliance with the required emission limit or reduction is demonstrated in accordance with the initial compliance procedures in §63.1257(d), and continuous compliance is demonstrated in accordance with the monitoring requirements described in §63.1258.
- [§63.1254(b)(1)]
- b) Annual mass limit. The actual HAP emissions from the sum of all process vents for which the permittee is not complying with §63.1254(b)(1) are limited to 900 kg in any 365-day period.
- [§63.1254(b)(2)]
3. Alternative standard. As an alternative standard, the permittee may comply with the process vent standards by routing vents from a process to a combustion control device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less, and an outlet concentration of hydrogen halides and halogens of 20 ppmv or less. If the permittee is routing emissions to a noncombustion control device, it must achieve an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 50 ppmv or less, and an outlet concentration of hydrogen halides and halogens of 50 ppmv or less. Any process vents within a process that are not routed to this control device shall be controlled in accordance with the provisions of §63.1254(a) or (b), as applicable. Initial compliance with the outlet concentrations is demonstrated in accordance with the initial compliance procedures described in §63.1257(d)(1)(iv), and continuous compliance is demonstrated in accordance with the emission monitoring requirements described in §63.1258(b)(5). [§63.1254(c)]

Equipment Leak Standards:

1. General equipment leak requirements. [§63.1255(a)]
- a) The provisions of §63.1255 apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, control devices, and closed-vent systems required by §63.1255 that are intended to operate in organic HAP service 300 hours or more during the calendar year within a source subject to the provisions of MACT GGG. [§63.1255(a)(1)]
- b) Consistency with other regulations. After the compliance date for a process, equipment subject to both §63.1255 and either of the following will be required to comply only with the provisions of MACT GGG: [§63.1255(a)(2)]
- i) 40 CFR Part 60. [§63.1255(a)(2)(i)]
- ii) 40 CFR Part 61. [§63.1255(a)(2)(ii)]
- c) The provisions in §63.1(a)(3) do not alter the provisions in §63.1255(a)(2). [§63.1255(a)(4)]
- d) Lines and equipment not containing process fluids are not subject to the provisions of §63.1255. Utilities, and other nonprocess lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not considered to be part of a process. [§63.1255(a)(5)]
- e) The provisions of §63.1255 do not apply to bench-scale processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of MACT GGG. [§63.1255(a)(6)]
- f) Equipment to which §63.1255 applies shall be identified such that it can be distinguished readily from equipment that is not subject to §63.1255. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process boundaries by some form of weatherproof identification. If changes are made to the affected source subject to the leak detection requirements, equipment identification for each type of component shall be updated, if needed,

- within 90 calendar days or by the next Periodic Report following the end of the monitoring period for that component, whichever is later. [§63.1255(a)(7)]
- g) Equipment that is in vacuum service is excluded from the requirements of §63.1255. [§63.1255(a)(8)]
 - h) Equipment that is in organic HAP service, but is in such service less than 300 hours per calendar year, is excluded from the requirements of §63.1255 if it is identified as required in §63.1255(g)(9). [§63.1255(a)(9)]
 - i) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c), the following requirements apply: [§63.1255(a)(10)]
 - i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1255(a)(10)(i)]
 - ii) The identification on a valve in light liquid or gas/vapor service may be removed after it has been monitored as specified in §63.1255(e)(7)(iii), and no leak has been detected during the follow-up monitoring. [§63.1255(a)(10)(ii)]
 - iii) The identification on equipment, except on a valve in light liquid or gas/vapor service, may be removed after it has been repaired. [§63.1255(a)(10)(iii)]
 - j) Except as provided in §63.1255(a)(11)(i), all terms in MACT GGG that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual) refer to the standard calendar periods unless specified otherwise in the section or paragraph that imposes the requirement. [§63.1255(a)(11)]
 - i) If the initial compliance date does not coincide with the beginning of the standard calendar period, the permittee may elect to utilize a period beginning on the compliance date, or may elect to comply in accordance with the provisions of §63.1255(a)(11)(ii) or (iii). [§63.1255(a)(11)(i)]
 - ii) Time periods specified in MACT GGG for completion of required tasks may be changed by mutual agreement between the permittee and the Director, as specified in MACT A. For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period. [§63.1255(a)(11)(ii)]
 - iii) Except as provided in §63.1255(a)(11)(i) or (ii), where the period specified for compliance is a standard calendar period, if the initial compliance date does not coincide with the beginning of the calendar period, compliance shall be required according to the schedule specified in §63.1255(a)(11)(iii)(A) or (B), as appropriate. [§63.1255(a)(11)(iii)]
 - (1) Compliance shall be required before the end of the standard calendar period within which the initial compliance date occurs if there remain at least three days for tasks that must be performed weekly, at least two weeks for tasks that must be performed monthly, at least one month for tasks that must be performed each quarter, or at least three months for tasks that must be performed annually; or [§63.1255(a)(11)(iii)(A)]
 - (2) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance date occurs. [§63.1255(a)(11)(iii)(B)]
 - iv) In all instances where a provision of MACT GGG requires completion of a task during each of multiple successive periods, the permittee may perform the required task at any time during each period, provided the task is conducted at a reasonable interval after completion of the task during the previous period. [§63.1255(a)(11)(iv)]
 - k) In all cases where the provisions of MACT GGG require the permittee to repair leaks by a specified time after the leak is detected, it is a violation of §63.1255 to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified

time, failure of that action to successfully repair the leak is not a violation of §63.1255. However, if the repairs are unsuccessful, a leak is detected and the permittee shall take further action as required by applicable provisions of §63.1255. [§63.1255(a)(12)]

2. References. [§63.1255(b)]

- a) The permittee shall comply with the provisions of MACT H, as specified in §63.1255(b)(2) through (4). The term “process unit” as used in MACT H shall be considered to be defined the same as “group of processes” for sources subject to MACT GGG. The term “fuel gas system,” as used in MACT H, shall not apply for the purposes of MACT GGG. [§63.1255(b)(1)]
- b) §§63.160, 63.161, 63.162, 63.163, 63.167, 63.168, 63.170, 63.173, 63.175, 63.176, 63.181, and 63.182 shall not apply for the purposes of MACT GGG. The permittee shall comply with the provisions specified in §63.1255(b)(2)(i) through (viii). [§63.1255(b)(2)]
 - i) §§63.160 and 63.162 shall not apply; instead, the permittee shall comply with §63.1255(a); [§63.1255(b)(2)(i)]
 - ii) §63.161 shall not apply; instead, the permittee shall comply with §63.1251; [§63.1255(b)(2)(ii)]
 - iii) §§63.163 and 63.173 shall not apply; instead, the permittee shall comply with §63.1255(c); [§63.1255(b)(2)(iii)]
 - iv) §63.167 shall not apply; instead, the permittee shall comply with §63.1255(d); [§63.1255(b)(2)(iv)]
 - v) §63.168 shall not apply; instead, the permittee shall comply with §63.1255(e); [§63.1255(b)(2)(v)]
 - vi) §63.170 shall not apply; instead, the permittee shall comply with §63.1254; [§63.1255(b)(2)(vi)]
 - vii) §63.181 shall not apply; instead, the permittee shall comply with §63.1255(g); and [§63.1255(b)(2)(vii)]
 - viii) §63.182 shall not apply; instead, the permittee shall comply with §63.1255(h). [§63.1255(b)(2)(viii)]
- c) The permittee shall comply with §§63.164, 63.165, 63.166, 63.169, 63.177, and 63.179 in their entirety, except that when these sections reference other sections of MACT H, the references shall mean the sections specified in §63.1255(b)(2) and (4). §63.164 applies to compressors. §63.165 applies to pressure relief devices in gas/vapor service. §63.166 applies to sampling connection systems. §63.169 applies to pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service. §63.177 applies to general alternative means of emission limitation. §63.179 applies to alternative means of emission limitation for enclosed-vented process units. [§63.1255(b)(3)]
- d) The permittee shall comply with §§63.171, 63.172, 63.174, 63.178, and 63.180, except as specified in §63.1255(b)(4)(i) through (vi). [§63.1255(b)(4)]
 - i) §63.171 shall apply, except §63.171(a) shall not apply.
 - ii) §63.172 shall apply for closed-vent systems used to comply with §63.1255, and for control devices used to comply with §63.1255 only, except: [§63.1255(b)(4)(ii)]
 - (1) §63.172(k) and (l) shall not apply. The permittee shall instead comply with §63.1255(f). [§63.1255(b)(4)(ii)(A)]
 - iii) §63.174 shall apply except: [§63.1255(b)(4)(iii)]
 - (1) §63.174(f), (g), and (h) shall not apply. Instead of §63.174(f), (g), and (h), the permittee shall comply with §63.1255(f). §63.174(b)(3) shall not apply. Instead of §63.174(b)(3), the permittee shall comply with §63.1255(b)(4)(iii)(B) through (F). [§63.1255(b)(4)(iii)(A)]

- iv) §63.178 shall apply except: [§63.1255(b)(4)(iv)]
 - (1) §63.178(b), requirements for pressure testing, may be applied to all processes (not just batch processes) and to supply lines between storage and processing areas. [§63.1255(b)(4)(iv)(A)]
 - (2) For pumps, the phrase “at the frequencies specified in Table 1 of MACT H” in §63.178(c)(3)(iii) shall mean “quarterly” for the purposes of MACT GGG. [§63.1255(b)(4)(iv)(B)]
 - v) §63.180 shall apply except §63.180(b)(4)(ii)(A) through (C) shall not apply. Instead, calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 ppm methane for agitators; 2,000 ppm for pumps; and 500 ppm for all other equipment, except as provided in §63.180(b)(4)(iii). [§63.1255(b)(4)(v)]
 - vi) When §§63.171, 63.172, 63.174, 63.178, and 63.180 reference other sections in MACT H, the references shall mean those sections specified in §63.1255(b)(2) and (b)(4)(i) through (v), as applicable. [§63.1255(b)(4)(vi)]
3. Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1255(c)]
- a) The provisions of §63.1255 apply to each pump that is in light organic HAP liquid service, and to each agitator in organic HAP gas/vapor service or in light organic HAP liquid service. [§63.1255(c)(1)]
 - i) Monitoring. Each pump and agitator subject to §63.1255 shall be monitored quarterly to detect leaks by the method specified in §63.180(b) except as provided in §§63.177, 63.178, §63.1255(f), and §63.1255(c)(5) through (9). [§63.1255(c)(2)(i)]
 - ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b), that defines a leak is: [§63.1255(c)(2)(ii)]
 - (1) For agitators, an instrument reading of 10,000 ppm or greater. [§63.1255(c)(2)(ii)(A)]
 - (2) For pumps, an instrument reading of 2,000 ppm or greater. [§63.1255(c)(2)(ii)(B)]
 - iii) Visual Inspections. Each pump and agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump or agitator seal. If there are indications of liquids dripping from the pump or agitator seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1255(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1255(c)(2)(iii)]
 - (1) The permittee shall monitor the pump or agitator by the method specified in §63.180(b). If the instrument reading indicates a leak as specified in §63.1255(c)(2)(ii), a leak is detected. [§63.1255(c)(2)(iii)(A)]
 - (2) The permittee shall eliminate the visual indications of liquids dripping. [§63.1255(c)(2)(iii)(B)]
 - b) Repair provisions. [§63.1255(c)(3)]
 - i) When a leak is detected pursuant to §63.1255(c)(2)(i), (c)(2)(iii)(A), (c)(5)(iv)(A), or (c)(5)(vi)(B), it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.1255(b)(4)(i). [§63.1255(c)(3)(i)]
 - ii) A first attempt at repair shall be made no later than five calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1255(c)(3)(ii)]
 - (1) Tightening of packing gland nuts. [§63.1255(c)(3)(ii)(A)]
 - (2) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1255(c)(3)(ii)(B)]
 - c) Calculation of percent leakers. [§63.1255(c)(4)]

- i) The permittee shall decide no later than the end of the first monitoring period what groups of processes will be developed. Once the permittee has decided, all subsequent percent calculations shall be made on the same basis. [§63.1255(c)(4)(i)]
- ii) If, calculated on a one-year rolling average, the greater of either 10 percent or three of the pumps in a group of processes leak, the permittee shall monitor each pump once per month, until the calculated one-year rolling average value drops below 10 percent or three pumps, as applicable. [§63.1255(c)(4)(ii)]
- iii) The number of pumps in a group of processes shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process within one quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1255(c)(4)(iii)]
- iv) Percent leaking pumps shall be determined by the following Equation 3:

$$\%P_L = \left[\frac{P_L - P_S}{P_T - P_S} \right] \times 100 \quad \text{Equation 3}$$

Where:

$\%P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through periodic monitoring as required in §63.1255(c)(2)(i) and (ii).

- v) P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1255(c)(5) and (6).
 - vi) P_S = number of pumps in a continuous process leaking within one quarter of startup during the current monitoring period. [§63.1255(c)(4)(iv)]
- d) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of §63.1255(c)(1) through (c)(4)(iii), provided the following requirements are met: [§63.1255(c)(5)]
- i) Each dual mechanical seal system is: [§63.1255(c)(5)(i)]
 - (1) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1255(c)(5)(i)(A)]
 - (2) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of §63.1255(b)(4)(ii); or [§63.1255(c)(5)(i)(B)]
 - (3) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1255(c)(5)(i)(C)]
 - ii) The barrier fluid is not in light liquid service. [§63.1255(c)(5)(ii)]
 - iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [§63.1255(c)(5)(iii)]
 - iv) Each pump/agitator is checked by visual inspection each calendar week for indications of liquids dripping from the pump/agitator seal. If there are indications of liquids dripping from the pump or agitator seal at the time of the weekly inspection, the permittee shall follow the procedures specified in either §63.1255(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1255(c)(5)(iv)]
 - (1) The permittee shall monitor the pump or agitator using the method specified in §63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If the instrument reading indicates a leak, as specified in §63.1255(c)(2)(ii), a leak is detected. [§63.1255(c)(5)(iv)(A)]
 - (2) The permittee shall eliminate the visual indications of liquids dripping. [§63.1255(c)(5)(iv)(B)]

- v) Each sensor as described in §63.1255(c)(5)(iii) is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.
[§63.1255(c)(5)(v)]
 - (1) The permittee determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system, or both. [§63.1255(c)(5)(vi)(A)]
 - (2) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1255(c)(5)(vi)(A), or if, based on the criteria established in §63.1255(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1255(c)(5)(vi)(B)]
- vi) When a leak is detected pursuant to §63.1255(c)(5)(iv)(A) or (B), the leak shall be repaired as specified in §63.1255(c)(3). [§63.1255(c)(5)(vii)]
- e) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1255(c)(1) through (3).
[§63.1255(c)(6)]
- f) Any pump/agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of §63.1255(b)(4)(ii) is exempt from the requirements of §63.1255(c)(2) through (5). [§63.1255(c)(7)]
- g) Any pump/agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of §63.1255(c)(2)(iii) and (c)(5)(iv), and the daily requirements of §63.1255(c)(5)(v), provided that each pump/agitator is visually inspected as often as practicable and at least monthly. [§63.1255(c)(8)]
- h) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1255(c)(5) or (6), the group of processes is exempt from the requirements of §63.1255(c)(4).
[§63.1255(c)(9)]
- 4. a) Standards: Open-ended valves or lines. [§63.1255(d)]
 - i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.177 and §63.1255(d)(4) through (6). [§63.1255(d)(1)(i)]
 - ii) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. The cap, blind flange, plug, or second valve shall be in place within one hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within one hour of cessation of maintenance or repair. The permittee is not required to keep a record documenting compliance with the one-hour requirement.
[§63.1255(d)(1)(ii)]
- b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
[§63.1255(d)(2)]
- c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with §63.1255(d)(1) at all other times. [§63.1255(d)(3)]
- d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of §63.1255(d)(1) through (d)(3). [§63.1255(d)(4)]
- e) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1255(d)(1) through (d)(3). [§63.1255(d)(5)]

- f) Open-ended valves or lines containing materials which could cause an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in §63.1255(d)(1) through (d)(3) are exempt from the requirements of §63.1255(d)(1) through (d)(3). [§63.1255(d)(6)]
- 5. Standards: Valves in gas/vapor service and in light liquid service. [§63.1255(e)]
 - a) The provisions of §63.1255 apply to valves that are either in gas organic HAP service or in light liquid organic HAP service. [§63.1255(e)(1)]
 - b) For existing and new affected sources, all valves subject to §63.1255 shall be monitored, except as provided in §63.1255(f) and in §63.177, by no later than one year after the compliance date. [§63.1255(e)(2)]
 - c) Monitoring. The permittee shall monitor all valves, except as provided in §63.1255(f) and in §63.177, at the intervals specified in §63.1255(e)(4) and shall comply with all other provisions of §63.1255, except as provided in §63.1255(b)(4)(i), §§63.178 and 63.179. [§63.1255(e)(3)]
 - i) The valves shall be monitored to detect leaks by the method specified in §63.180(b). [§63.1255(e)(3)(i)]
 - ii) An instrument reading of 500 ppm or greater defines a leak. [§63.1255(e)(3)(ii)]
 - d) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1255(e)(2), the permittee shall monitor valves for leaks at the intervals specified below: [§63.1255(e)(4)]
 - i) For a group of processes with two percent or greater leaking valves, calculated according to §63.1255(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1255(e)(9). [§63.1255(e)(4)(i)]
 - ii) For a group of processes with less than two percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1255(e)(4)(iii) through (e)(4)(v). [§63.1255(e)(4)(ii)]
 - iii) For a group of processes with less than one percent leaking valves, the permittee may elect to monitor each valve once every two quarters. [§63.1255(e)(4)(iii)]
 - iv) For a group of processes with less than 0.5 percent leaking valves, the permittee may elect to monitor each valve once every four quarters. [§63.1255(e)(4)(iv)]
 - v) For a group of processes with less than 0.25 percent leaking valves, the permittee may elect to monitor each valve once every two years. [§63.1255(e)(4)(v)]
 - e) Calculation of percent leakers. For a group of processes to which MACT GGG applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1255(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1255(e)(5)(i) through (e)(5)(viii) apply. [§63.1255(e)(5)]
 - i) The overall performance of total valves in the applicable group of processes shall be less than two percent leaking valves, as detected according to §63.1255(e)(3)(i) and (ii) and as calculated according to §63.1255(e)(6)(ii) and (iii). [§63.1255(e)(5)(i)]
 - ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1255(e)(5)(ii) (A) through (C). [§63.1255(e)(5)(ii)]
 - (1) The permittee shall determine which valves are assigned to each subgroup. Valves with less than one year of monitoring data or valves not monitored within the last 12 months shall be placed initially into the most frequently monitored subgroup until at least one year of monitoring data has been obtained. [§63.1255(e)(5)(ii)(A)]
 - (2) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be

- reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results shall be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1255(e)(5)(ii)(B)]
- (3) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Nonrepairable valves may not be reassigned to a less frequently monitored subgroup. [§63.1255(e)(5)(ii)(C)]
- iii) The permittee shall determine every six months if the overall performance of total valves in the applicable group of processes is less than two percent leaking valves and so indicate the performance in the next periodic report. If the overall performance of total valves in the applicable group of processes is two percent leaking valves or greater, the permittee shall revert to the program required in §63.1255(e)(2) through (e)(4). The overall performance of total valves in the applicable group of processes shall be calculated as a weighted average of the percent leaking valves of each subgroup according to the following Equation 4:

$$\%V_{LO} = \frac{\sum_{i=1}^n (\%V_{Li} \times V_i)}{\sum_{i=1}^n V_i} \quad \text{Equation 4}$$

where:

$\%V_{LO}$ = overall performance of total valves in the applicable process or group of processes

$\%V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1255(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i [§63.1255(e)(5)(iii)]

- iv) Records. In addition to records required by §63.1255(g), the permittee shall maintain records specified in §63.1255(e)(5)(iv)(A) through (D). [§63.1255(e)(5)(iv)]
- (1) Which valves are assigned to each subgroup, [§63.1255(e)(5)(iv)(A)]
 - (2) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1255(e)(5)(iv)(B)]
 - (3) Which valves are reassigned and when they were reassigned, and [§63.1255(e)(5)(iv)(C)]
 - (4) The results of the semiannual overall performance calculation required in §63.1255(e)(5)(iii). [§63.1255(e)(5)(iv)(D)]
- v) The permittee shall notify the Administrator no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating processes and the valves assigned to each subgroup. [§63.1255(e)(5)(v)]
- vi) Semiannual reports. In addition to the information required by §63.1255(h)(3), the permittee shall submit in the periodic reports the information specified in §63.1255(e)(5)(vi)(A) and (B). [§63.1255(e)(5)(vi)]
- (1) Valve reassignments occurring during the reporting period, and [§63.1255(e)(5)(vi)(A)]
 - (2) Results of the semiannual overall performance calculation required by §63.1255(e)(5)(iii). [§63.1255(e)(5)(vi)(B)]
- vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1255(e)(6)(iii) shall be used. [§63.1255(e)(5)(vii)]
- viii) Except for the overall performance calculations required by §63.1255(e)(5)(i) and (e)(5)(iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of §63.1255. [§63.1255(e)(5)(viii)]

- ix) The permittee shall decide no later than the implementation date of MACT GGG or upon revision of an operating permit how to group the processes. Once the permittee has decided, all subsequent percentage calculations shall be made on the same basis. [§63.1255(e)(6)(i)]
- x) Percent leaking valves for each group of processes or subgroup shall be determined by the following Equation 5:

$$\%V_L = \left[\frac{V_L}{V_T} \right] \times 100 \quad \text{Equation 5}$$

Where:

$\%V_L$ = percent leaking valves as determined through periodic monitoring required in §63.1255(e)(2) through (4).

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1255(e)(7)(iii) [§63.1255(e)(6)(ii)]

- xi) When determining monitoring frequency for each group of processes or subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each group of processes or subgroup subject to annual or biennial (once every two years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1255(e)(6)(iii)]
 - (1) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with §63.1255(e)(6)(iv)(B). Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of one percent of the total number of valves in organic HAP service at a process may be excluded from calculation of percent leaking valves for subsequent monitoring periods. [§63.1255(e)(6)(iv)(A)]
 - (2) If the number of nonrepairable valves exceeds one percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding one percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1255(e)(6)(iv)(B)]
- f) Repair provisions. [§63.1255(e)(7)]
 - i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §63.1255(b)(4)(i). [§63.1255(e)(7)(i)]
 - ii) A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§63.1255(e)(7)(ii)]
 - iii) When a leak is repaired, the valve shall be monitored at least once within the first three months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this three month period. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definitions of “repaired” and “first attempt at repair.” [§63.1255(e)(7)(iii)]
 - (1) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate to determine whether the valve has resumed leaking. [§63.1255(e)(7)(iii)(A)]
 - (2) Periodic monitoring required by §63.1255(e)(2) through (4) may be used to satisfy the requirements of §63.1255(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1255(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1255(e)(7)(iii), regardless of whether the

- timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1255(e)(7)(iii). [§63.1255(e)(7)(iii)(B)]
- (3) If a leak is detected by monitoring that is conducted pursuant to §63.1255(e)(7)(iii), the permittee shall follow the provisions of §63.1255(e)(7)(iii)(C)(1) and (2) to determine whether that valve must be counted as a leaking valve for purposes of §63.1255(e)(6). [§63.1255(e)(7)(iii)(C)]
- (a) If the permittee elects to use periodic monitoring required by §63.1255(e)(2) through (4) to satisfy the requirements of §63.1255(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1255(e)(7)(iii)(C)(1)]
- (b) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1255(e)(2) through (4) to satisfy the requirements of §63.1255(e)(7)(iii), then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking. [§63.1255(e)(7)(iii)(C)(2)]
- g) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1255(e)(8)]
- i) Tightening of bonnet bolts, [§63.1255(e)(8)(i)]
- ii) Replacement of bonnet bolts, [§63.1255(e)(8)(ii)]
- iii) Tightening of packing gland nuts, and [§63.1255(e)(8)(iii)]
- iv) Injection of lubricant into lubricated packing. [§63.1255(e)(8)(iv)]
- h) Any equipment located at a plant site with fewer than 250 valves in organic HAP service in the affected source is exempt from the requirements for monthly monitoring specified in §63.1255(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1255(e)(4)(iii), (iv), or (v), except as provided in §63.1255(f). [§63.1255(e)(9)]
6. Unsafe to monitor/inspect, difficult to monitor/inspect, and inaccessible equipment. [§63.1255(f)]
- a) Equipment that is designated as unsafe to monitor, unsafe to inspect, difficult to monitor, difficult to inspect, or inaccessible is exempt from the monitoring requirements as specified in §63.1255(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1255(f)(2), (3), or (4), as applicable. All equipment shall be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1255(f)(1)]
- i) For pumps and agitators, §63.1255(c)(2), (3), and (4) do not apply. [§63.1255(f)(1)(i)]
- ii) For valves, §63.1255(e)(2) through (7) do not apply. [§63.1255(f)(1)(ii)]
- iii) For connectors, §63.174(b) through (e) and §63.1255(b)(4)(iii)(B) through (F) do not apply. [§63.1255(f)(1)(iii)]
- iv) For closed-vent systems, §63.172(f)(1) and (2) and §63.172(g) do not apply. [§63.1255(f)(1)(iv)]
- b) Equipment that is unsafe to monitor or unsafe to inspect. [§63.1255(f)(2)]
- i) Valves, connectors, agitators, and pumps may be designated as unsafe to monitor if the permittee determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements referred to in §63.1255(f)(1)(i) through (iii). [§63.1255(f)(2)(i)]
- ii) Any part of a closed-vent system may be designated as unsafe to inspect if the permittee determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements referred to in §63.1255(f)(1)(iv). [§63.1255(f)(2)(ii)]

- iii) For equipment that is designated as unsafe to monitor, the permittee shall have a written plan that requires monitoring of the equipment as frequently as practicable during safe to monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. [§63.1255(f)(2)(iii)]
- iv) For any parts of a closed-vent system designated as unsafe to inspect, the permittee shall have a written plan that requires inspection of the closed-vent systems as frequently as practicable during safe to inspect times, but not more frequently than annually. [§63.1255(f)(2)(iv)]
- c) Equipment that is difficult to monitor or difficult to inspect. [§63.1255(f)(3)]
 - i) A valve, agitator, or pump may be designated as difficult to monitor if the permittee determines that the valve, agitator, or pump cannot be monitored without elevating the monitoring personnel more than two meters above a support surface, or it is not accessible in a safe manner when it is in organic HAP service. [§63.1255(f)(3)(i)]
 - ii) Any part of a closed-vent system may be designated as difficult to inspect if the permittee determines that the equipment cannot be inspected without elevating the monitoring personnel more than two meters above a support surface, or it is not accessible in a safe manner when it is in organic HAP service. [§63.1255(f)(3)(ii)]
 - iii) At an existing source, any valve, agitator or pump within a group of processes that meets the criteria of §63.1255(f)(3)(i) may be designated as difficult to monitor, and any parts of a closed-vent system that meet the requirements of §63.1255(f)(3)(ii) may be designated as difficult to inspect. At a new affected source, the permittee may designate no more than three percent of valves as difficult to monitor. [§63.1255(f)(3)(iii)]
 - iv) For valves, agitators, or pumps designated as difficult to monitor, the permittee shall have a written plan that requires monitoring of the equipment at least once per calendar year or on the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located, whichever is less frequent. For any part of a closed-vent system designated as difficult to inspect, the permittee shall have a written plan that requires inspection of the closed-vent system at least once every five years. [§63.1255(f)(3)(iv)]
- d) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1255(f)(4)]
 - i) A connector may be designated as inaccessible if it is: [§63.1255(f)(4)(i)]
 - (1) Buried; [§63.1255(f)(4)(i)(A)]
 - (2) Insulated in a manner that prevents access to the connector by a monitor probe; [§63.1255(f)(4)(i)(B)]
 - (3) Obstructed by equipment or piping that prevents access to the connector by a monitor probe; [§63.1255(f)(4)(i)(C)]
 - (4) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 m (25 ft) above the ground; or [§63.1255(f)(4)(i)(D)]
 - (5) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment. [§63.1255(f)(4)(i)(E)]
 - ii) A connector may be designated as inaccessible if it would require elevating the monitoring personnel more than two meters above a permanent support surface or would require the erection of scaffold. [§63.1255(f)(4)(ii)]

- iii) At an existing source, any connector that meets the criteria of §63.1255(f)(4)(i) or (ii) may be designated as inaccessible. At a new affected source, the permittee may designate no more than three percent of connectors as inaccessible. [§63.1255(f)(4)(iii)]
 - iv) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §63.1255(b)(4)(i). [§63.1255(f)(4)(iv)]
 - v) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1255(g) and (h). [§63.1255(f)(4)(v)]
7. Recordkeeping requirements. [§63.1255(g)]
- a) The permittee may comply with the recordkeeping requirements for the groups of processes in one recordkeeping system if the system identifies with each record the program being implemented (e.g., quarterly monitoring) for each type of equipment. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site. [§63.1255(g)(1)]
 - b) General recordkeeping. Except as provided in §63.1255(g)(5)(i) and in §63.1255(a)(9), the following information pertaining to all equipment subject to the requirements in §63.1255 shall be recorded: [§63.1255(g)(2)]
 - (1) A list of identification numbers for equipment (except connectors that are subject to §63.1255(f)(4)) subject to the requirements of §63.1255. Except for equipment subject to the recordkeeping requirements in §63.1255(g)(2)(ii) through (viii), equipment need not be individually identified if, for a particular type of equipment, all items of that equipment in a designated area or length of pipe subject to the provisions of §63.1255 are identified as a group, and the number of subject items of equipment is indicated. The list for each type of equipment shall be completed no later than the completion of the initial survey required for that component. The list of identification numbers shall be updated, if needed, to incorporate equipment changes identified during the course of each monitoring period within 90 calendar days, or by the next Periodic Report, following the end of the monitoring period for the type of equipment component monitored, whichever is later. [§63.1255(g)(2)(i)(A)]
 - (2) A schedule for monitoring connectors subject to the provisions of §63.174(a) and valves subject to the provisions of §63.1255(e)(4). [§63.1255(g)(2)(i)(B)]
 - (3) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of §63.1255 may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1255(g)(2)(i)(C)]
 - (4) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of §63.1255(c)(7), §63.164(h), or §63.165(c). [§63.1255(g)(2)(ii)(A)]
 - (5) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 ppm above background, under the provisions of §63.164(i). [§63.1255(g)(2)(ii)(B)]
 - (6) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a). [§63.1255(g)(2)(iii)(A)]
 - (7) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d). [§63.1255(g)(2)(iii)(B)]

- ii) Identification of instrumentation systems subject to the provisions of §63.1255. Individual components in an instrumentation system need not be identified. [§63.1255(g)(2)(iv)]
- iii) The following information shall be recorded for each dual mechanical seal system:
 - [§63.1255(g)(2)(v)]
 - (1) Design criteria required by §63.1255(c)(5)(vi)(A) and §63.164(e)(2), and an explanation of the design criteria; and [§63.1255(g)(2)(v)(A)]
 - (2) Any changes to these criteria and the reasons for the changes. [§63.1255(g)(2)(v)(B)]
- iv) A list of equipment designated as unsafe to monitor/inspect or difficult to monitor/inspect under §63.1255(f) and a copy of the plan for monitoring or inspecting this equipment. [§63.1255(g)(2)(vi)]
- v) A list of connectors removed from and added to the process, as described in §63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j). This is not required unless the net credits for removed connectors is expected to be used. [§63.1255(g)(2)(vii)]
- vi) For equipment that the permittee elects to monitor as provided under §63.178(c), a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii). This list shall be completed for each type of equipment within 90 calendar days, or by the next Periodic Report, following the end of the monitoring period for the type of equipment monitored, whichever is later. Also, if the permittee elects to adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii), records demonstrating the proportion of the time during the calendar year the equipment is in use in a manner subject to the provisions of §63.1255 are required. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. [§63.1255(g)(2)(viii)]
- c) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1255(c)(2)(iii) and (c)(5)(iv), the permittee shall document that the inspection was conducted and the date of the inspection. The permittee shall maintain records as specified in §63.1255(g)(4) for leaking equipment identified in this inspection, except as provided in §63.1255(g)(5). These records shall be retained for two years. [§63.1255(g)(3)]
- d) Monitoring records. When each leak is detected as specified in §63.1255(c) and §63.164, §63.1255(e) and §63.169, and §§63.172 and 63.174, the following information shall be recorded and kept for five years (at least two years onsite, with the remaining three years either onsite or offsite): [§63.1255(g)(4)]
 - i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1255(g)(4)(i)]
 - ii) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1255(g)(4)(ii)]
 - iii) The date of successful repair of the leak. [§63.1255(g)(4)(iii)]
 - iv) The maximum instrument reading measured by Method 21 of NSPS Appendix A, after the leak is successfully repaired or determined to be nonrepairable. [§63.1255(g)(4)(iv)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1255(g)(4)(v)]
 - (1) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures shall be included in a document that is maintained at the plant site. Reasons for delay of repair may be documented by citing the relevant sections of the written procedure. [§63.1255(g)(4)(v)(A)]

- (2) If delay of repair was caused by depletion of stocked parts, there shall be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1255(g)(4)(v)(B)]
- vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1255(g)(4)(vi)]
 - (1) If the alternative in §63.174(c)(1)(ii) is not in use for the monitoring period, identification, either by list, location (area or grouping), or tagging of connectors disturbed since the last monitoring period required in §63.174(b), as described in §63.174(c)(1). [§63.1255(g)(4)(vii)(A)]
 - (2) The date and results of follow-up monitoring as required in §63.174(c)(1)(i) and (c)(2)(ii). If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1255(g)(4)(vii)(B)]
- vii) The date and results of the monitoring required in §63.178(c)(3)(i) for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii). If no leaking equipment is found in this monitoring, the permittee shall record that the inspection was performed. Records of the actual monitoring results are not required. [§63.1255(g)(4)(viii)]
- viii) Copies of the periodic reports as specified in §63.1255(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1255(g)(4)(ix)]
- e) Records of pressure tests. If the permittee elects to pressure test a process equipment train or supply lines between storage and processing areas to demonstrate compliance with §63.1255, the permittee is exempt from the requirements of §63.1255(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1255(g)(5)]
 - i) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in the process equipment train. [§63.1255(g)(5)(i)]
 - ii) Physical tagging of the equipment to identify that it is in organic HAP service and subject to the provisions of this section is not required. Equipment in a process subject to the provisions of §63.1255 may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1255(g)(5)(ii)]
 - iii) The dates of each pressure test required in §63.178(b), the test pressure, and the pressure drop observed during the test. [§63.1255(g)(5)(iii)]
 - iv) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1255(g)(5)(iv)]
 - v) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for two years: [§63.1255(g)(5)(v)]
 - (1) The date of each pressure test and the date of each leak repair attempt. [§63.1255(g)(5)(v)(A)]
 - (2) Repair methods applied in each attempt to repair the leak. [§63.1255(g)(5)(v)(B)]
 - (3) The reason for the delay of repair. [§63.1255(g)(5)(v)(C)]
 - (4) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1255(g)(5)(v)(D)]
 - (5) The date of successful repair. [§63.1255(g)(5)(v)(E)]
- f) Records of compressor and relief device compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in §§63.165(a) and (b). The results shall include: [§63.1255(g)(6)]

- i) The background level measured during each compliance test. [§63.1255(g)(6)(i)]
- ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1255(g)(6)(ii)]
- g) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1255(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1255(b)(4)(ii). The records specified in §63.1255(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1255(g)(7)(ii) and (g)(7)(iii) shall be retained for two years. [§63.1255(g)(7)]
 - i) The design specifications and performance demonstrations specified in §63.1255(g)(7)(i)(A) through (g)(7)(i)(D). [§63.1255(g)(7)(i)]
 - (1) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1255(g)(7)(i)(A)]
 - (2) The dates and descriptions of any changes in the design specifications. [§63.1255(g)(7)(i)(B)]
 - (3) A description of the parameter or parameters monitored, as required in §63.1255(b)(4)(ii), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring. [§63.1255(g)(7)(i)(D)]
 - ii) Records of operation of closed-vent systems and control devices. [§63.1255(g)(7)(ii)]
 - (1) Dates and durations when the closed-vent systems and control devices required in §63.1255(c) and §§63.164 through 63.166 are not operated as designed as indicated by the monitored parameters. [§63.1255(g)(7)(ii)(A)]
 - (2) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1255(g)(7)(ii)(B)]
 - (3) Dates and durations of startups and shutdowns of control devices required in §63.1255(c)(7) and §§63.164 through 63.166. [§63.1255(g)(7)(ii)(C)]
 - iii) Records of inspections of closed-vent systems subject to the provisions of §63.172. [§63.1255(g)(7)(iii)]
 - (1) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1255(g)(7)(iii)(A)]
 - (2) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) during which leaks were detected, the information specified in §63.1255(g)(4) shall be recorded. [§63.1255(g)(7)(iii)(B)]
- h) Records for components in heavy liquid service. Information, data, and analysis used to determine that a piece of equipment or process is in heavy liquid service shall be recorded. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of “in light liquid or gas service.” Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge. [§63.1255(g)(8)]
- i) Records of exempt components. Identification, either by list, location (area or group) of equipment in organic HAP service less than 300 hours per year subject to the provisions of §63.1255. [§63.1255(g)(9)]
- j) Records of alternative means of compliance determination. If the permittee chooses to comply with the requirements of §63.179, the permittee shall maintain the following records: [§63.1255(g)(10)]

- i) Identification of the process(es) and the organic HAP they handle. [§63.1255(g)(10)(i)]
 - ii) A schematic of the process, enclosure, and closed-vent system. [§63.1255(g)(10)(ii)]
 - iii) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device. [§63.1255(g)(10)(iii)]
8. Reporting requirements. [§63.1255(h)]
- a) The permittee shall submit the reports listed in §63.1255(h)(1)(i) through (ii). [§63.1255(h)(1)]
 - i) A Notification of Compliance Status Report described in §63.1255(h)(2), [§63.1255(h)(1)(i)]
 - ii) Periodic reports described in §63.1255(h)(3). [§63.1255(h)(1)(ii)]
 - b) Notification of compliance status report. The permittee shall submit the information specified in §63.1255(h)(2)(i) through (iii) in the Notification of Compliance Status Report described in §63.1260(f). [§63.1255(h)(2)]
 - i) The notification shall provide the information listed in §63.1255(h)(2)(i)(A) through (C) for each process subject to the requirements of §63.1255(b) through (g). [§63.1255(h)(2)(i)]
 - (1) Process group identification. [§63.1255(h)(2)(i)(A)]
 - (2) Number of each equipment type (e.g., valves, pumps) in organic HAP service, excluding equipment in vacuum service. [§63.1255(h)(2)(i)(B)]
 - (3) Method of compliance with the standard (for example, “monthly leak detection and repair” or “equipped with dual mechanical seals”). [§63.1255(h)(2)(i)(C)]
 - ii) The notification shall provide the information listed in §63.1255(h)(2)(ii)(A) and (B) for each process subject to the requirements of §63.1255(b)(4)(iv) and §63.178(b). [§63.1255(h)(2)(ii)]
 - (1) Products or product codes subject to the provisions of §63.1255, and [§63.1255(h)(2)(ii)(A)]
 - (2) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of §63.1255. [§63.1255(h)(2)(ii)(B)]
 - iii) The notification shall provide the information listed in §63.1255(h)(2)(iii)(A) and (B) for each process subject to the requirements in §63.179. [§63.1255(h)(2)(iii)]
 - (1) Process identification. [§63.1255(h)(2)(iii)(A)]
 - (2) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of §63.1255(b)(4)(ii). [§63.1255(h)(2)(iii)(B)]
 - iv) §63.9(j) shall not apply to the Notification of Compliance Status report described in §63.1255(h)(2). [§63.1255(h)(2)(iv)]
 - c) Periodic reports. The permittee shall submit Periodic Reports. [§63.1255(h)(3)]
 - i) A report containing the information in §63.1255(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first report shall be submitted no later than 240 days after the Notification of Compliance Status Report is due and shall cover the six-month period beginning on the date the Notification of Compliance Status Report is due. Each subsequent report shall cover the six-month period following the preceding period. [§63.1255(h)(3)(i)]
 - ii) For equipment complying with the provisions of §63.1255(b) through (g), except §63.1255(b)(4)(iv) and §63.179, the summary information listed in §63.1255(h)(3)(ii)(A) through (L) for each monitoring period during the six-month period. [§63.1255(h)(3)(ii)]
 - (1) The number of valves for which leaks were detected as described in §63.1255(e)(3), the percent leakers, and the total number of valves monitored; [§63.1255(h)(3)(ii)(A)]

- (2) The number of valves for which leaks were not repaired as required in §63.1255(e)(7), identifying the number of those that are determined nonrepairable; [§63.1255(h)(3)(ii)(B)]
- (3) Separately, the number of pumps and agitators for which leaks were detected as described in §63.1255(c)(2), the total number of pumps and agitators monitored, and, for pumps, the percent leakers; [§63.1255(h)(3)(ii)(C)]
- (4) Separately, the number of pumps and agitators for which leaks were not repaired as required in §63.1255(c)(3); [§63.1255(h)(3)(ii)(D)]
- (5) The number of compressors for which leaks were detected as described in §63.164(f); [§63.1255(h)(3)(ii)(E)]
- (6) The number of compressors for which leaks were not repaired as required in §63.164(g); [§63.1255(h)(3)(ii)(F)]
- (7) The number of connectors for which leaks were detected as described in §63.174(a), the percent of connectors leaking, and the total number of connectors monitored; [§63.1255(h)(3)(ii)(G)]
- (8) The number of connectors for which leaks were not repaired as required in §63.174(d), identifying the number of those that are determined nonrepairable; [§63.1255(h)(3)(ii)(H)]
- (9) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1255(h)(3)(ii)(I)]
- (10) The results of all monitoring to show compliance with §§63.164(i), 63.165(a), and 63.172(f) conducted within the semiannual reporting period. [§63.1255(h)(3)(ii)(J)]
- (11) If applicable, the initiation of a monthly monitoring program under either §63.1255(c)(4)(ii) or §63.1255(e)(4)(i). [§63.1255(h)(3)(ii)(K)]
- (12) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1). [§63.1255(h)(3)(ii)(L)]
- iii) If the permittee elects to meet the requirements of §63.178(b), the report shall include the information listed in §63.1255(h)(3)(iii)(A) through (E) for each process. [§63.1255(h)(3)(iii)]
 - (1) Product process equipment train identification; [§63.1255(h)(3)(iii)(A)]
 - (2) The number of pressure tests conducted; [§63.1255(h)(3)(iii)(B)]
 - (3) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1255(h)(3)(iii)(C)]
 - (4) The facts that explain any delay of repairs; and [§63.1255(h)(3)(iii)(D)]
 - (5) The results of all monitoring to determine compliance with §63.172(f). [§63.1255(h)(3)(iii)(E)]
- iv) Any revisions to items reported in earlier Notification of Compliance Status report, if the method of compliance has changed since the last report. [§63.1255(h)(3)(iv)]

Wastewater Standards:

1. General. The permittee shall comply with the general wastewater requirements in §63.1256(a)(1) through (3) and the maintenance wastewater provisions in §63.1256(a)(4). The permittee may transfer wastewater to a treatment operation not owned by the permittee in accordance with §63.1256(a)(5). [§63.1256(a)]
 - a) Identify wastewater that requires control. For each point of determination (POD), the permittee shall comply with the requirements in either §63.1256(a)(1)(i) or (ii) to determine whether a wastewater stream is an affected wastewater stream that requires control for soluble and/or

partially soluble HAP compounds or to designate the wastewater stream as an affected wastewater stream, respectively. The permittee may use a combination of the approaches in §63.1256(a)(1)(i) and (ii) for different affected wastewater generated at the source.

[§63.1256(a)(1)]

i) Determine characteristics of a wastewater stream. A wastewater stream is an affected wastewater stream if the annual average concentration and annual load exceed any of the criteria specified in §63.1256(a)(1)(i)(A) through (C). At new sources, a wastewater stream is subject to additional control requirements if the annual average concentration and annual load exceed the criteria specified in §63.1256(a)(1)(i)(D). The permittee shall comply with the provisions of §63.1257(e)(1) to determine the annual average concentrations and annual load of partially soluble and soluble HAP compounds. [§63.1256(a)(1)(i)]

(1) The wastewater stream contains partially soluble HAP compounds at an annual average concentration greater than 1,300 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 0.25 Mg/yr. [§63.1256(a)(1)(i)(A)]

(2) The wastewater stream contains partially soluble and/or soluble HAP compounds at an annual average concentration greater than 5,200 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 0.25 Mg/yr.

[§63.1256(a)(1)(i)(B)]

(3) The wastewater stream contains partially soluble and/or soluble HAP at an annual average concentration of greater than 10,000 ppmw, and the total partially soluble and/or soluble HAP load in all wastewater from the affected source is greater than 1 Mg/yr.

[§63.1256(a)(1)(i)(C)]

(4) The wastewater stream contains soluble HAP compounds at an annual average concentration greater than 110,000 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 1 Mg/yr. [§63.1256(a)(1)(i)(D)]

ii) Designate wastewater as affected wastewater. For existing sources, the permittee may elect to designate wastewater streams as meeting the criteria of either §63.1256(a)(1)(i)(A),(B), or (C). For new sources, the permittee may elect to designate wastewater streams meeting the criterion in §63.1256(a)(1)(i)(D) or for wastewater known to contain no soluble HAP, as meeting the criterion in §63.1256(a)(1)(i)(A). For designated wastewater the procedures specified in §63.1256(a)(1)(ii)(A) and (B) shall be followed, except as specified in §63.1256(g)(8)(i), (g)(9)(i), and (g)(10). The permittee is not required to determine the annual average concentration or load for each designated wastewater stream for the purposes of this paragraph [§63.1256(a)(1)(ii)]

(1) From the POD for the wastewater stream that is designated as an affected wastewater stream to the location where the permittee elects to designate such wastewater stream as an affected wastewater stream, the permittee shall comply with all applicable emission suppression requirements specified in §63.1256(b) through (f). [§63.1256(a)(1)(ii)(A)]

(2) From the location where the permittee designates a wastewater stream as an affected wastewater stream, such wastewater stream shall be managed in accordance with all applicable emission suppression requirements specified in §63.1256(b) through (f) and with the treatment requirements in §63.1256(g). [§63.1256(a)(1)(ii)(B)]

iii) Scrubber effluent. Effluent from a water scrubber that has been used to control Table 2 to MACT GGG HAP-containing vent streams that are controlled in order to meet the process vent requirements in §63.1254 of MACT GGG is considered an affected wastewater stream.

[§63.1256(a)(1)(iii)]

b) Requirements for affected wastewater. [§63.1256(a)(2)]

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- i) The permittee shall comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators as specified in §63.1256(b) through (f), except as provided in §63.1256(g)(3). [§63.1256(a)(2)(i)]
 - ii) Comply with the applicable requirements for control of soluble and partially soluble compounds as specified in §63.1256(g). Alternatively, the permittee may elect to comply with the treatment provisions specified in §63.1256(a)(5). [§63.1256(a)(2)(ii)]
 - iii) Comply with the applicable monitoring and inspection requirements specified in §63.1258. [§63.1256(a)(2)(iii)]
 - iv) Comply with the applicable recordkeeping and reporting requirements specified in §§63.1259 and 63.1260. [§63.1256(a)(2)(iv)]
- c) Requirements for multiphase discharges. The permittee shall not discharge a separate phase that can be isolated through gravity separation from the aqueous phase to a waste management or treatment unit, unless the stream is discharged to a treatment unit in compliance with §63.1256(g)(13). [§63.1256(a)(3)]
 - d) Maintenance wastewater requirements. The permittee shall comply with the requirements of §63.1256(a)(4)(i) through (iv) for maintenance wastewater containing partially soluble or soluble HAP listed in Tables 2 and 3 of MACT GGG. Maintenance wastewater is exempt from all other provisions of MACT GGG. [§63.1256(a)(4)]
 - i) The permittee shall prepare a description of maintenance procedures for management of wastewater generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall be included in a document that is maintained at the plant site and shall: [§63.1256(a)(4)(i)]
 - (1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities; and [§63.1256(a)(4)(i)(A)]
 - (2) Specify the procedures that will be followed to properly manage the wastewater and minimize organic HAP emissions to the atmosphere; and [§63.1256(a)(4)(i)(B)]
 - (3) Specify the procedures to be followed when clearing materials from process equipment. [§63.1256(a)(4)(i)(C)]
 - ii) The permittee shall modify and update the information required by §63.1256(a)(4)(i) as needed following each maintenance procedure based on the actions taken and the wastewater generated in the preceding maintenance procedure. [§63.1256(a)(4)(ii)]
 - e) Offsite treatment or onsite treatment not owned or operated by the source. The permittee may elect to transfer affected wastewater streams or a residual removed from such affected wastewater to an onsite treatment operation not owned or operated by the permittee, or to an offsite treatment operation. [§63.1256(a)(5)]
 - i) The permittee shall: [§63.1256(a)(5)(i)]
 - (1) Comply with the provisions specified in paragraphs (b) through (f) of this section for each waste management unit that receives or manages affected wastewater or a residual removed from affected wastewater prior to shipment or transport. [§63.1256(a)(5)(i)(A)]
 - (2) Include a notice with each shipment or transport of affected wastewater or residual removed from affected wastewater. The notice shall state that the affected wastewater or residual contains organic HAP that are to be treated in accordance with the provisions of MACT GGG. When the transport is continuous or ongoing (for example, discharge to a publicly-owned treatment works), the notice shall be submitted to the treatment operator

- initially and whenever there is a change in the required treatment. The permittee shall keep a record of the notice in accordance with §63.1259(g). [§63.1256(a)(5)(i)(B)]
- ii) The permittee may not transfer the affected wastewater or residual unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any affected wastewater or residual removed from affected wastewater received from a source subject to the requirements of MACT GGG in accordance with the requirements of either: [§63.1256(a)(5)(ii)]
- (1) §63.1256(b) through (i); or [§63.1256(a)(5)(ii)(A)]
 - (2) 40 CFR Part 63, Subpart D if alternative emission limitations have been granted the transferor in accordance with those provisions; or [§63.1256(a)(5)(ii)(B)]
 - (3) §63.6(g); or [§63.1256(a)(5)(ii)(C)]
 - (4) If the affected wastewater streams or residuals removed from affected wastewater streams received by the transferee contain less than 50 ppmw of partially soluble HAP, then the transferee must, at a minimum, manage and treat the affected wastewater streams and residuals in accordance with one of the following: [§63.1256(a)(5)(ii)(D)]
 - (a) Comply with §63.1256(g)(10) and cover the waste management units up to the activated sludge unit; or [§63.1256(a)(5)(ii)(D)(1)]
 - (b) Comply with §63.1256(g)(11)(i), (ii), and (h) and cover the waste management units up to the activated sludge unit; or [§63.1256(a)(5)(ii)(D)(2)]
 - (c) Comply with §63.1256(g)(10) provided that the permittee demonstrates that less than five percent of the total soluble HAP is emitted from waste management units up to the activated sludge unit; or [§63.1256(a)(5)(ii)(D)(3)]
 - (d) Comply with §63.1256(g)(11)(i), (ii), and (h) provided that the permittee demonstrates that less than five percent of the total soluble HAP is emitted from waste management units up to the activated sludge unit. [§63.1256(a)(5)(ii)(D)(4)]
- iii) The certifying entity may revoke the written certification by sending a written statement to the EPA and the permittee giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions listed in this paragraph. Upon expiration of the notice period, the permittee may not transfer the wastewater stream or residual to the treatment operation. [§63.1256(a)(5)(iii)]
- iv) By providing this written certification to the EPA, the certifying entity accepts responsibility for compliance with the regulatory provisions listed in §63.1256(a)(5)(ii) with respect to any shipment of wastewater or residual covered by the written certification. Failure to abide by any of those provisions with respect to such shipments may result in enforcement action by the EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of these provisions by owners or operators of sources. [§63.1256(a)(5)(iv)]
- v) Written certifications and revocation statements, to the EPA from the transferees of wastewater or residuals shall be signed by the responsible official of the certifying entity, provide the name and address of the certifying entity, and be sent to the appropriate EPA Regional Office at the addresses listed in §63.13. Such written certifications are not transferable by the treater. [§63.1256(a)(5)(v)]
2. Wastewater tanks. For each wastewater tank that receives, manages, or treats affected wastewater or a residual removed from affected wastewater, the permittee shall comply with the requirements of either §63.1256(b)(1) or (2) as specified in Table 6 of MACT GGG. [§63.1256(b)]
- a) The permittee shall operate and maintain a fixed roof except when the contents of the wastewater tank are heated, treated by means of an exothermic reaction, or sparged, during which time the

- permittee shall comply with the requirements specified in §63.1256(b)(2). For the purposes of this paragraph, the requirements of §63.1256(b)(2) are satisfied by operating and maintaining a fixed roof if the permittee demonstrates that the total soluble and partially soluble HAP emissions from the wastewater tank are no more than five percent higher than the emissions would be if the contents of the wastewater tank were not heated, treated by an exothermic reaction, or sparged. [§63.1256(b)(1)]
- b) The permittee shall comply with the requirements in §63.1256(b)(3) through (9) and shall operate and maintain one of the emission control techniques listed in §63.1256(b)(2)(i) through (iii). [§63.1256(b)(2)]
- i) A fixed roof and a closed-vent system that routes the organic HAP vapors vented from the wastewater tank to a control device; or [§63.1256(b)(2)(i)]
- ii) A fixed roof and an internal floating roof that meets the requirements specified in §63.119(b), with the differences noted in §63.1257(c)(3)(i) through (iii) for the purposes of MACT GGG; or [§63.1256(b)(2)(ii)]
- iii) An external floating roof that meets the requirements specified in §§63.119(c), 63.120(b)(5), and 63.120(b)(6), with the differences noted in §63.1257(c)(3)(i) through (v) for the purposes of MACT GGG. [§63.1256(b)(2)(iii)]
- c) If the permittee elects to comply with the requirements of §63.1256(b)(2)(i), the fixed roof shall meet the requirements of §63.1256(b)(3)(i), the control device shall meet the requirements of §63.1256(b)(3)(ii), and the closed-vent system shall meet the requirements of §63.1256(b)(3)(iii). [§63.1256(b)(3)]
- i) The fixed roof shall meet the following requirements: [§63.1256(b)(3)(i)]
- (1) Except as provided in §63.1256(b)(3)(iv), the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in §63.1258(h). [§63.1256(b)(3)(i)(A)]
- (2) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains affected wastewater or residual removed from affected wastewater except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. [§63.1256(b)(3)(i)(B)]
- ii) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.1256(h). [§63.1256(b)(3)(ii)]
- iii) Except as provided in §63.1256(b)(3)(iv), the closed-vent system shall be inspected in accordance with the requirements of §63.1258(h). [§63.1256(b)(3)(iii)]
- iv) For any fixed roof tank and closed-vent system that is operated and maintained under negative pressure, the permittee is not required to comply with the requirements specified in §63.1258(h). [§63.1256(b)(3)(iv)]
- d) If the permittee elects to comply with the requirements of §63.1256(b)(2)(ii), the floating roof shall be inspected according to the procedures specified in §63.120(a)(2) and (3), with the differences noted in §63.1257(c)(3)(iv) for the purposes of MACT GGG. [§63.1256(b)(4)]
- e) Except as provided in §63.1256(b)(6), if the permittee elects to comply with the requirements of §63.1256(b)(2)(iii), seal gaps shall be measured according to the procedures specified in §63.120(b)(2)(i) through (b)(4) and the wastewater tank shall be inspected to determine compliance with §63.120(b)(5) and (6) according to the schedule specified in §63.120(b)(1)(i) through (iii). [§63.1256(b)(5)]
- f) If the permittee determines that it is unsafe to perform the seal gap measurements specified in §63.120(b)(2)(i) through (b)(4) or to inspect the wastewater tank to determine compliance with §63.120(b)(5) and (6) because the floating roof appears to be structurally unsound and poses an

imminent or potential danger to inspecting personnel, the permittee shall comply with the requirements in either §63.1256(b)(6)(i) or (ii). [§63.1256(b)(6)]

- i) The permittee shall measure the seal gaps or inspect the wastewater tank within 30 calendar days of the determination that the floating roof is unsafe. [§63.1256(b)(6)(i)]
- ii) The permittee shall empty and remove the wastewater tank from service within 45 calendar days of determining that the roof is unsafe. If the wastewater tank cannot be emptied within 45 calendar days, the permittee may utilize up to two extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the wastewater tank will be emptied as soon as possible. [§63.1256(b)(6)(ii)]
- g) Except as provided in §63.1256(b)(6), each wastewater tank shall be inspected initially, and semiannually thereafter, for improper work practices in accordance with §63.1258(g). For wastewater tanks, improper work practice includes, but is not limited to, leaving open any access door or other opening when such door or opening is not in use. [§63.1256(b)(7)]
- h) Except as provided in §63.1256(b)(6), each wastewater tank shall be inspected for control equipment failures as defined in §63.1256(b)(8)(i) according to the schedule in §63.1256(b)(8)(ii) and (iii) in accordance with §63.1258(g). [§63.1256(b)(8)]
 - i) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in §63.1256(b)(8)(i)(A) through (I). [§63.1256(b)(8)(i)]
 - (1) The floating roof is not resting on either the surface of the liquid or on the leg supports. [§63.1256(b)(8)(i)(A)]
 - (2) There is stored liquid on the floating roof. [§63.1256(b)(8)(i)(B)]
 - (3) A rim seal is detached from the floating roof. [§63.1256(b)(8)(i)(C)]
 - (4) There are holes, tears, cracks or gaps in the rim seal or seal fabric of the floating roof. [§63.1256(b)(8)(i)(D)]
 - (5) There are visible gaps between the seal of an internal floating roof and the wall of the wastewater tank. [§63.1256(b)(8)(i)(E)]
 - (6) There are gaps between the metallic shoe seal or the liquid mounted primary seal of an external floating roof and the wall of the wastewater tank that exceed 212 square centimeters per meter of tank diameter or the width of any portion of any gap between the primary seal and the tank wall exceeds 3.81 cm. [§63.1256(b)(8)(i)(F)]
 - (7) There are gaps between the secondary seal of an external floating roof and the wall of the wastewater tank that exceed 21.2 square centimeters per meter of tank diameter or the width of any portion of any gap between the secondary seal and the tank wall exceeds 1.27 cm. [§63.1256(b)(8)(i)(G)]
 - (8) Where a metallic shoe seal is used on an external floating roof, one end of the metallic shoe does not extend into the stored liquid or one end of the metallic shoe does not extend a minimum vertical distance of 61 cm above the surface of the stored liquid. [§63.1256(b)(8)(i)(H)]
 - (9) A gasket, joint, lid, cover, or door has a crack or gap, or is broken. [§63.1256(b)(8)(i)(I)]
 - ii) The permittee shall inspect for the control equipment failures in §63.1256(b)(8)(i)(A) through (H) according to the schedule specified in §63.1256(b)(4) and (5). [§63.1256(b)(8)(ii)]
 - iii) The permittee shall inspect for the control equipment failures in §63.1256(b)(8)(i)(I) initially, and semiannually thereafter. [§63.1256(b)(8)(iii)]

- i) Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than five calendar days after identification and repair shall be completed within 45 calendar days after identification. If a failure that is detected during inspections required by §63.1256 cannot be repaired within 45 calendar days and if the tank cannot be emptied within 45 calendar days, the permittee may utilize up to two extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the tank will be emptied as soon as practical. [§63.1256(b)(9)]
 - j) The emission limits specified in §63.1256(b)(2) and (h) for control devices used to control emissions from wastewater tanks do not apply during periods of planned routine maintenance of the control device(s) of no more than 240 hours in any 365-day period. The permittee may submit an application to the Director requesting an extension of this time limit to a total of 360 hours in any 365-day period. The application shall explain why the extension is needed, it shall specify that no affected wastewater will be added to the tank between the time the 240-hour limit is exceeded and the control device is again operational, and it shall be submitted at least 60 days before the 240-hour limit will be exceeded. Wastewater tanks shall not be sparged with air or other gases without an operational control device. [§63.1256(b)(10)]
3. Surface impoundments. For each surface impoundment that receives, manages, or treats affected wastewater or a residual removed from affected wastewater, the permittee shall comply with the requirements of §63.1256(c)(1), (2), and (3). [§63.1256(c)]
- a) The owner or operator shall operate and maintain on each surface impoundment either a cover (e.g., air-supported structure or rigid cover) and a closed-vent system that routes the organic HAP vapors vented from the surface impoundment to a control device in accordance with §63.1256(c)(1)(i), (iii), (iv), and (v), or a floating flexible membrane cover as specified in §63.1256(c)(1)(ii). [§63.1256(c)(1)]
 - i) The cover and all openings shall meet the following requirements: [§63.1256(c)(1)(i)]
 - (1) Except as provided in §63.1256(c)(1)(v), the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in §63.1258(h). [§63.1256(c)(1)(i)(A)]
 - (2) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that affected wastewater or residual removed from affected wastewater is in the surface impoundment except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair. [§63.1256(c)(1)(i)(B)]
 - (3) The cover shall be used at all times that affected wastewater or residual removed from affected wastewater is in the surface impoundment except during removal of treatment residuals in accordance with 40 CFR 268.4 or closure of the surface impoundment in accordance with 40 CFR 264.228. [§63.1256(c)(1)(i)(C)]
 - ii) Floating flexible membrane covers shall meet the requirements specified in §63.1256(c)(1)(ii)(A) through (F). [§63.1256(c)(1)(ii)]
 - (1) The floating flexible cover shall be designed to float on the liquid surface during normal operations, and to form a continuous barrier over the entire surface area of the liquid. [§63.1256(c)(1)(ii)(A)]
 - (2) The cover shall be fabricated from a synthetic membrane material that is either: [§63.1256(c)(1)(ii)(B)]

- (a) High density polyethylene (HDPE) with a thickness no less than 2.5 mm (100 mils); or [§63.1256(c)(1)(ii)(B)(1)]
- (b) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in §63.1256(c)(1)(ii)(B)(1), and chemical and physical properties that maintain the material integrity for the intended service life of the material. [§63.1256(c)(1)(ii)(B)(2)]
- (3) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings. [§63.1256(c)(1)(ii)(C)]
- (4) Except as provided for in §63.1256(c)(1)(ii)(E), each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. [§63.1256(c)(1)(ii)(D)]
- (5) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal. [§63.1256(c)(1)(ii)(E)]
- (6) The closure devices shall be made of suitable materials that will minimize exposure of organic HAP to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered in designing the closure devices shall include: the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed. [§63.1256(c)(1)(ii)(F)]
- (7) Whenever affected wastewater or residual from affected wastewater is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position. Opening of closure devices or removal of the cover is allowed to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations and/or to remove accumulated sludge or other residues from the bottom of surface impoundment. Openings shall be maintained in accordance with §63.1258(h). [§63.1256(c)(1)(ii)(G)]
- iii) The control device shall be designed, operated, and inspected in accordance with §63.1256(h). [§63.1256(c)(1)(iii)]
- iv) Except as provided in §63.1256(c)(1)(v), the closed-vent system shall be inspected in accordance with §63.1258(h). [§63.1256(c)(1)(iv)]
- v) For any cover and closed-vent system that is operated and maintained under negative pressure, the permittee is not required to comply with the requirements specified in §63.1258(h). [§63.1256(c)(1)(v)]
- b) Each surface impoundment shall be inspected initially, and semiannually thereafter, for improper work practices and control equipment failures in accordance with §63.1258(g). [§63.1256(c)(2)]
 - i) For surface impoundments, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use. [§63.1256(c)(2)(i)]
 - ii) For surface impoundments, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a crack or gap, or is broken. [§63.1256(c)(2)(ii)]

- c) Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than five calendar days after identification and repair shall be completed within 45 calendar days after identification.
[§63.1256(c)(3)]
4. Containers. For each container that receives, manages, or treats affected wastewater or a residual removed from affected wastewater, the permittee shall comply with the requirements of §63.1256(d)(1) through (5). [§63.1256(d)]
- a) The permittee shall operate and maintain a cover on each container used to handle, transfer, or store affected wastewater or a residual removed from affected wastewater in accordance with the following requirements: [§63.1256(d)(1)]
- i) Except as provided in §63.1256(d)(3)(iv), if the capacity of the container is greater than 0.42 m³, the cover and all openings (e.g., bungs, hatches, sampling points, and pressure relief valves) shall be controlled in accordance with the requirements of either §63.1256(d)(1)(i)(A) or (d)(1)(i)(B). [§63.1256(d)(1)(i)]
- (1) The requirements specified in §63.1258(h); or [§63.1256(d)(1)(i)(A)]
- (2) The requirements of 40 CFR Part 63, Subpart PP for containers using level 2 controls that meet the definitions in §63.923(b)(1) or (2). [§63.1256(d)(1)(i)(B)]
- ii) If the capacity of the container is less than or equal to 0.42 m³, the permittee shall comply with either §63.1256(d)(1)(ii)(A) or (B). [§63.1256(d)(1)(ii)]
- (1) The container shall meet existing Department of Transportation specifications and testing requirements under 49 CFR Part 178; or [§63.1256(d)(1)(ii)(A)]
- (2) Except as provided in §63.1256(d)(3)(iv), the cover and all openings shall be maintained without leaks as specified in §63.1258(h). [§63.1256(d)(1)(ii)(B)]
- iii) The cover and all openings shall be maintained in a closed position (e.g., covered by a lid) at all times that affected wastewater or a residual removed from affected wastewater is in the container except when it is necessary to use the opening for filling, removal, inspection, sampling, or pressure relief events related to safety considerations. [§63.1256(d)(1)(iii)]
- b) Filling of large containers. Pumping affected wastewater or a residual removed from affected wastewater into a container with a capacity greater than or equal to 0.42 m³ shall be conducted in accordance with the conditions in §63.1256(d)(2)(i) and (ii). [§63.1256(d)(2)]
- i) Comply with any one of the procedures specified in §63.1256(d)(2)(i)(A), (B), or (C). [§63.1256(d)(2)(i)]
- (1) Use a submerged fill pipe. The submerged fill pipe outlet shall extend to no more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled. [§63.1256(d)(2)(i)(A)]
- (2) Locate the container within an enclosure with a closed-vent system that routes the organic HAP vapors vented from the container to a control device. [§63.1256(d)(2)(i)(B)]
- (3) Use a closed-vent system to vent the displaced organic vapors vented from the container to a control device or back to the equipment from which the wastewater is transferred. [§63.1256(d)(2)(i)(C)]
- ii) The cover shall remain in place and all openings shall be maintained in a closed position except for those openings required for the submerged fill pipe and for venting of the container to prevent physical damage or permanent deformation of the container or cover. [§63.1256(d)(2)(ii)]
- c) During treatment of affected wastewater or a residual removed from affected wastewater, including aeration, thermal or other treatment, in a container, whenever it is necessary for the container to be open, the container shall be located within an enclosure with a closed-vent system

that routes the organic HAP vapors vented from the container to a control device.

[§63.1256(d)(3)]

i) Except as provided in §63.1256(d)(3)(iv), the enclosure and all openings (e.g., doors, hatches) shall be maintained in accordance with the requirements specified in §63.1258(h).

[§63.1256(d)(3)(i)]

ii) The control device shall be designed, operated, and inspected in accordance with §63.1256(h). [§63.1256(d)(3)(ii)]

iii) Except as provided in §63.1256(d)(3)(iv), the closed-vent system shall be inspected in accordance with §63.1258(h). [§63.1256(d)(3)(iii)]

iv) For any enclosure and closed-vent system that is operated and maintained under negative pressure, the permittee is not required to comply with the requirements specified in §63.1258(h). [§63.1256(d)(3)(iv)]

d) Each container shall be inspected initially, and semiannually thereafter, for improper work practices and control equipment failures in accordance with §63.1258(g). [§63.1256(d)(4)]

i) For containers, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use. [§63.1256(d)(4)(i)]

ii) For containers, control equipment failure includes, but is not limited to, any time a cover or door has a gap or crack, or is broken. [§63.1256(d)(4)(ii)]

e) Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than five calendar days after identification and repair shall be completed within 15 calendar days after identification.

[§63.1256(d)(5)]

5. Individual drain systems. For each individual drain system that receives or manages affected wastewater or a residual removed from affected wastewater, the permittee shall comply with the requirements of §63.1256(e)(1), (2), and (3) or with §63.1256(e) (4), (5), and (6). [§63.1256(e)]

a) If the permittee elects to comply with this paragraph, the permittee shall operate and maintain on each opening in the individual drain system a cover and if vented, route the vapors to a process or through a closed-vent system to a control device. The permittee shall comply with the requirements of §63.1256(e)(1)(i) through (v). [§63.1256(e)(1)]

i) The cover and all openings shall meet the following requirements: [§63.1256(e)(1)(i)]

(1) Except as provided in §63.1256(e)(1)(iv), the cover and all openings (e.g., access hatches, sampling ports) shall be maintained in accordance with the requirements specified in §63.1258(h). [§63.1256(e)(1)(i)(A)]

(2) The cover and all openings shall be maintained in a closed position at all times that affected wastewater or a residual removed from affected wastewater is in the drain system except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair. [§63.1256(e)(1)(i)(B)]

ii) The control device shall be designed, operated, and inspected in accordance with §63.1256(h). [§63.1256(e)(1)(ii)]

iii) Except as provided in §63.1256(e)(1)(iv), the closed-vent system shall be inspected in accordance with §63.1258(h). [§63.1256(e)(1)(iii)]

iv) For any cover and closed-vent system that is operated and maintained under negative pressure, the permittee is not required to comply with the requirements specified in §63.1258(h). [§63.1256(e)(1)(iv)]

v) The individual drain system shall be designed and operated to segregate the vapors within the system from other drain systems and the atmosphere. [§63.1256(e)(1)(v)]

- b) Each individual drain system shall be inspected initially, and semiannually thereafter, for improper work practices and control equipment failures, in accordance with §63.1258(g). [§63.1256(e)(2)]
- i) For individual drain systems, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use for sampling or removal, or for equipment inspection, maintenance, or repair. [§63.1256(e)(2)(i)]
- ii) For individual drain systems, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a gap or crack, or is broken. [§63.1256(e)(2)(ii)]
- c) Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than five calendar days after identification and repair shall be completed within 15 calendar days after identification. [§63.1256(e)(3)]
- d) If the permittee elects to comply with this paragraph, the permittee shall comply with the requirements in §63.1256(e)(4)(i) through (iii): [§63.1256(e)(4)]
- i) Each drain shall be equipped with water seal controls or a tightly fitting cap or plug. The permittee shall comply with §63.1256(e)(4)(i)(A) and (B). [§63.1256(e)(4)(i)]
- (1) For each drain equipped with a water seal, the permittee shall ensure that the water seal is maintained. For example, a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap by a hose could be used to verify flow of water to the trap. Visual observation is also an acceptable alternative. [§63.1256(e)(4)(i)(A)]
- (2) If a water seal is used on a drain receiving affected wastewater, the permittee shall either extend the pipe discharging the wastewater below the liquid surface in the water seal of the receiving drain, or install a flexible shield (or other enclosure which restricts wind motion across the open area between the pipe and the drain) that encloses the space between the pipe discharging the wastewater to the drain receiving the wastewater. (Water seals which are used on hubs receiving wastewater that is not subject to the provisions of MACT GGG for the purpose of eliminating cross ventilation to drains carrying affected wastewater are not required to have a flexible shield or extended subsurface discharging pipe.) [§63.1256(e)(4)(i)(B)]
- ii) Each junction box shall be equipped with a tightly fitting solid cover (i.e., no visible gaps, cracks, or holes) which shall be kept in place at all times except during inspection and maintenance. If the junction box is vented, permittee shall comply with the requirements in §63.1256(e)(4)(ii)(A) or (B). [§63.1256(e)(4)(ii)]
- (1) The junction box shall be vented to a process or through a closed-vent system to a control device. The closed-vent system shall be inspected in accordance with the requirements of §63.1258(h) and the control device shall be designed, operated, and inspected in accordance with the requirements of §63.1256(h). [§63.1256(e)(4)(ii)(A)]
- (2) If the junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level, the permittee may vent the junction box to the atmosphere provided that the junction box complies with the requirements in §63.1256(e)(4)(ii)(B)(1) and (2). [§63.1256(e)(4)(ii)(B)]
- (a) The vent pipe shall be at least 90 cm in length and no greater than 10.2 cm in nominal inside diameter. [§63.1256(e)(4)(ii)(B)(1)]
- (b) Water seals shall be installed and maintained at the wastewater entrance(s) to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system. The permittee shall demonstrate

(e.g., by visual inspection or smoke test) upon request by the Director that the junction box water seal is properly designed and restricts ventilation.

[§63.1256(e)(4)(ii)(B)(2)]

iii) The permittee shall operate and maintain sewer lines as specified in §63.1256(e)(4)(iii)(A) and (B). [§63.1256(e)(4)(iii)]

(1) Except as specified in §63.1256(e)(4)(iii)(B), each sewer line shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visible gaps or cracks in joints, seals, or other emission interfaces. Note: This provision applies to sewers located inside and outside of buildings. [§63.1256(e)(4)(iii)(A)]

(2) A sewer line connected to drains that are in compliance with §63.1256(e)(4)(i) may be vented to the atmosphere, provided that the sewer line entrance to the first downstream junction box is water sealed and the sewer line vent pipe is designed as specified in §63.1256(e)(4)(ii)(B)(1). [§63.1256(e)(4)(iii)(B)]

e) Equipment used to comply with §63.1256(e)(4)(i), (ii), or (iii) shall be inspected as follows: [§63.1256(e)(5)]

i) Each drain using a tightly fitting cap or plug shall be visually inspected initially, and semiannually thereafter, to ensure caps or plugs are in place and that there are no gaps, cracks, or other holes in the cap or plug. [§63.1256(e)(5)(i)]

ii) Each junction box shall be visually inspected initially, and semiannually thereafter, to ensure that there are no gaps, cracks, or other holes in the cover. [§63.1256(e)(5)(ii)]

iii) The unburied portion of each sewer line shall be visually inspected initially, and semiannually thereafter, for indication of cracks or gaps that could result in air emissions. [§63.1256(e)(5)(iii)]

f) Except as provided in §63.1256(i), when a gap, hole, or crack is identified in a joint or cover, first efforts at repair shall be made no later than five calendar days after identification, and repair shall be completed within 15 calendar days after identification. [§63.1256(e)(6)]

6. Oil-water separators. For each oil-water separator that receives, manages, or treats affected wastewater or a residual removed from affected wastewater, the permittee shall comply with the requirements of §63.1256(f)(1) through (6). [§63.1256(f)]

a) The permittee shall maintain one of the following: [§63.1256(f)(1)]

i) A fixed roof and a closed-vent system that routes the organic HAP vapors vented from the oil-water separator to a control device. The fixed roof, closed-vent system, and control device shall meet the requirements specified in §63.1256(f)(2); [§63.1256(f)(1)(i)]

ii) A floating roof that meets the requirements in §60.693-2(a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4). For portions of the oil-water separator where it is infeasible to construct and operate a floating roof, such as over the weir mechanism, the permittee shall operate and maintain a fixed roof, closed-vent system, and control device that meet the requirements specified in §63.1256(f)(2). [§63.1256(f)(1)(ii)]

b) A fixed roof shall meet the requirements of §63.1256(f)(2)(i), a control device shall meet the requirements of §63.1256(f)(2)(ii), and a closed-vent system shall meet the requirements of §63.1256(f)(2)(iii). [§63.1256(f)(2)]

i) The fixed roof shall meet the following requirements: [§63.1256(f)(2)(i)]

(1) Except as provided in §63.1256(f)(2)(iv), the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in §63.1258(h). [§63.1256(f)(2)(i)(A)]

(2) 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 oil-water separator contains affected

- wastewater or a residual removed from affected wastewater except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair. [§63.1256(f)(2)(i)(B)]
- ii) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.1256(h). [§63.1256(f)(2)(ii)]
 - iii) Except as provided in §63.1256(f)(2)(iv), the closed-vent system shall be inspected in accordance with the requirements of §63.1258(h). [§63.1256(f)(2)(iii)]
 - iv) For any fixed-roof and closed-vent system that is operated and maintained under negative pressure, the permittee is not required to comply with the requirements of §63.1258(h). [§63.1256(f)(2)(iv)]
- c) If the permittee elects to comply with the requirements of §63.1256(f)(1)(ii), seal gaps shall be measured according to the procedures specified in §60.696(d)(1) and the schedule specified in §63.1256(f)(3)(i) and (ii). [§63.1256(f)(3)]
- i) Measurement of primary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of affected wastewater or a residual removed from affected wastewater and once every five years thereafter. [§63.1256(f)(3)(i)]
 - ii) Measurement of secondary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of affected wastewater or a residual removed from affected wastewater and once every year thereafter. [§63.1256(f)(3)(ii)]
- d) Each oil-water separator shall be inspected initially, and semiannually thereafter, for improper work practices in accordance with §63.1258(g). For oil-water separators, improper work practice includes, but is not limited to, leaving open or ungasketed any access door or other opening when such door or opening is not in use. [§63.1256(f)(4)]
- e) Each oil-water separator shall be inspected for control equipment failures as defined in §63.1256(f)(5)(i) according to the schedule specified in §63.1256(f)(5)(ii) and (iii). [§63.1256(f)(5)]
- i) For oil-water separators, control equipment failure includes, but is not limited to, the conditions specified in §63.1256(f)(5)(i)(A) through (G). [§63.1256(f)(5)(i)]
 - (1) The floating roof is not resting on either the surface of the liquid or on the leg supports. [§63.1256(f)(5)(i)(A)]
 - (2) There is stored liquid on the floating roof. [§63.1256(f)(5)(i)(B)]
 - (3) A rim seal is detached from the floating roof. [§63.1256(f)(5)(i)(C)]
 - (4) There are holes, tears, or other open spaces in the rim seal or seal fabric of the floating roof. [§63.1256(f)(5)(i)(D)]
 - (5) There are gaps between the primary seal and the separator wall that exceed 67 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the primary seal and the separator wall exceeds 3.8 cm. [§63.1256(f)(5)(i)(E)]
 - (6) There are gaps between the secondary seal and the separator wall that exceed 6.7 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the secondary seal and the separator wall exceeds 1.3 cm. [§63.1256(f)(5)(i)(F)]
 - (7) A gasket, joint, lid, cover, or door has a gap or crack, or is broken. [§63.1256(f)(5)(i)(G)]
 - ii) The permittee shall inspect for the control equipment failures in §63.1256(f)(5)(i)(A) through (F) according to the schedule specified in §63.1256(f)(3). [§63.1256(f)(5)(ii)]
 - iii) The permittee shall inspect for control equipment failures in §63.1256(f)(5)(i)(G) initially, and semiannually thereafter. [§63.1256(f)(5)(iii)]
- f) Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than five calendar days after

identification and repair shall be completed within 45 calendar days after identification.
[§63.1256(f)(6)]

7. Performance standards for treatment processes managing wastewater and/or residuals removed from wastewater. §63.1256 specifies the performance standards for treating affected wastewater. The permittee shall comply with the requirements as specified in §63.1256(g)(1) through (6). Where multiple compliance options are provided, the options may be used in combination for different wastewater and/or for different compounds (e.g., soluble versus partially soluble compounds) in the same wastewater, except where otherwise provided in §63.1256. Once affected wastewater or a residual removed from affected wastewater has been treated in accordance with MACT GGG, it is no longer subject to the requirements of MACT GGG. [§63.1256(g)]
 - a) Existing source. For a wastewater stream at an existing source that exceeds or is designated to exceed the concentration and load criteria in §63.1256(a)(1)(i)(A), the permittee shall comply with a control option in §63.1256(g)(8). For a wastewater stream at an existing source that exceeds the concentration and load criteria in either §63.1256(a)(1)(i)(B) or (C), the permittee shall comply with a control option in §63.1256(g)(8) and a control option in §63.1256(g)(9). As an alternative to the control options in §63.1256(g)(8) and (g)(9), the permittee may comply with a control option in either §63.1256(g)(10), (11) or (13), as applicable. [§63.1256(g)(1)]
 - b) New source. For a wastewater stream at a new source that exceeds or is designated to exceed the concentration and load criteria in §63.1256(a)(1)(i)(A), the permittee shall comply with a control option in §63.1256(g)(8). For wastewater at a new source that exceeds the concentration and load criteria in either §63.1256(a)(1)(i)(B) or (C), but does not exceed the criteria in §63.1256(a)(1)(i)(D), the permittee shall comply with a control option in §63.1256(g)(8) and a control option in §63.1256(g)(9). As an alternative to the control options in §63.1256(g)(8) and/or (9), the permittee may comply with a control option in either §63.1256(g)(10), (11), or (13), as applicable. For a wastewater stream at a new source that exceeds or is designated to exceed the concentration and load criteria in §63.1256(a)(1)(i)(D), the permittee shall comply with a control option in §63.1256(g)(12) or (13). [§63.1256(g)(2)]
 - c) Biological treatment processes. Biological treatment processes in compliance with §63.1256 may be either open or closed biological treatment processes as defined in §63.1251. An open biological treatment process in compliance with §63.1256 need not be covered and vented to a control device. An open or a closed biological treatment process in compliance with §63.1256 and using §63.1257(e)(2)(iii)(E) or (F) to demonstrate compliance is not subject to the requirements of §63.1256(b) and (c). A closed biological treatment process in compliance with §63.1256 and using §63.1257(e)(2)(iii)(G) to demonstrate compliance shall comply with the requirements of §63.1256(b) and (c). Waste management units upstream of an open or closed biological treatment process shall meet the requirements of §63.1256(b) through (f), as applicable. [§63.1256(g)(3)]
 - d) Performance tests and design evaluations. If the Resource Conservation and Recovery Act (RCRA) option [§63.1256(g)(13)] or the enhanced biological treatment process for soluble HAP compounds option [§63.1256(g)(10)] is selected to comply with §63.1256, neither a design evaluation nor a performance test is required. For any other nonbiological treatment process, and for closed biological treatment processes as defined in §63.1251, the permittee shall conduct either a design evaluation as specified in §63.1257(e)(2)(ii) or performance test as specified in §63.1257(e)(2)(iii). For each open biological treatment process as defined in §63.1251, the permittee shall conduct a performance test as specified in §63.1257(e)(2)(iii)(E) or (F). [§63.1256(g)(4)]

- e) Control device requirements. When gases are vented from the treatment process, the permittee shall comply with the applicable control device requirements specified in §63.1256(h) and §63.1257(e)(3), and the applicable leak inspection provisions specified in §63.1258(h). This requirement is in addition to the requirements for treatment systems specified in §63.1256(g)(8) through (14). This requirement does not apply to any open biological treatment process that meets the mass removal requirements. [§63.1256(g)(5)]
- f) Residuals: general. When residuals result from treating affected wastewater, the permittee shall comply with the requirements for residuals specified in §63.1256(g)(14). [§63.1256(g)(6)]
- g) Treatment using a series of treatment processes. In all cases where the wastewater provisions in MACT GGG allow or require the use of a treatment process or control device to comply with emissions limitations, the permittee may use multiple treatment processes or control devices, respectively. For combinations of treatment processes where the wastewater stream is conveyed by hard-piping, the permittee shall comply with either the requirements of §63.1256(g)(7)(i) or (ii). For combinations of treatment processes where the wastewater stream is not conveyed by hard-piping, the permittee shall comply with the requirements of §63.1256(g)(7)(ii). For combinations of control devices, the permittee shall comply with the requirements of §63.1256(g)(7)(i). [§63.1256(g)(7)]
 - i) Compliance across the combination of all treatment units or control devices in series. [§63.1256(g)(7)(i)]
 - (1) For combinations of treatment processes, the wastewater stream shall be conveyed by hard-piping between the treatment processes. For combinations of control devices, the vented gas stream shall be conveyed by hard-piping between the control devices. [§63.1256(g)(7)(i)(A)]
 - (2) For combinations of treatment processes, each treatment process shall meet the applicable requirements of §63.1256(b) through (f), except as provided in §63.1256(g)(3). [§63.1256(g)(7)(i)(B)]
 - (3) The permittee shall identify, and keep a record of, the combination of treatment processes or of control devices, including identification of the first and last treatment process or control device. The permittee shall include this information as part of the treatment process description reported in the Notification of Compliance Status. [§63.1256(g)(7)(i)(C)]
 - (4) The performance test or design evaluation shall determine compliance across the combination of treatment processes or control devices. If a performance test is conducted, the “inlet” shall be the point at which the wastewater stream or residual enters the first treatment process, or the vented gas stream enters the first control device. The “outlet” shall be the point at which the treated wastewater stream exits the last treatment process, or the vented gas stream exits the last control device. [§63.1256(g)(7)(i)(D)]
 - ii) Compliance across individual units. [§63.1256(g)(7)(ii)]
 - (1) For combinations of treatment processes, each treatment process shall meet the applicable requirements of §63.1256(b) through (f) except as provided in §63.1256(g)(3). [§63.1256(g)(7)(ii)(A)]
 - (2) The permittee shall identify, and keep a record of, the combination of treatment processes, including identification of the first and last treatment process. The permittee shall include this information as part of the treatment process description reported in the Notification of Compliance Status report. [§63.1256(g)(7)(ii)(B)]
 - (3) The permittee shall determine the mass removed or destroyed by each treatment process. The performance test or design evaluation shall determine compliance for the

- combination of treatment processes by adding together the mass removed or destroyed by each treatment process and determine the overall control efficiency of the treatment system. [§63.1256(g)(7)(ii)(C)]
- h) Control options: Wastewater containing partially soluble HAP compounds. The permittee shall comply with either §63.1256(g)(8)(i) or (ii) for the control of partially soluble HAP compounds at new or existing sources. [§63.1256(g)(8)]
- i) 50 ppmw concentration option. The permittee shall comply with §63.1256(g)(8)(i)(A) and (B). [§63.1256(g)(8)(i)]
- (1) Reduce, by removal or destruction, the concentration of total partially soluble HAP compounds to a level less than 50 ppmw as determined by the procedures specified in §63.1257(e)(2)(iii)(B). [§63.1256(g)(8)(i)(A)]
- (2) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater is designated as an affected wastewater as specified in §63.1256(a)(1)(ii). Dilution shall not be used to achieve compliance with this option. [§63.1256(g)(8)(i)(B)]
- ii) Percent mass removal/destruction option. The permittee shall reduce, by removal or destruction, the mass of total partially soluble HAP compounds by 99 percent or more. The removal destruction efficiency shall be determined by the procedures specified in §63.1257(e)(2)(ii) or (iii)(C) for noncombustion, nonbiological treatment processes; §63.1257(e)(2)(ii) or (iii)(D) for combustion processes; §63.1257(e)(2)(iii)(F) for open biological treatment processes; and §63.1257(e)(2)(ii) or (iii)(G) for closed biological treatment processes. [§63.1256(g)(8)(ii)]
- i) Control options: Wastewater containing soluble HAP compounds. The permittee shall comply with either §63.1256(g)(9)(i) or (ii) for the control of soluble HAP compounds at new or existing sources. [§63.1256(g)(9)]
- i) 520 ppmw concentration option. The permittee shall comply with §63.1256(g)(9)(i)(A) and (B). [§63.1256(g)(9)(i)]
- (1) Reduce, by removal or destruction, the concentration of total soluble HAP compounds to a level less than 520 ppmw as determined in the procedures specified in §63.1257(e)(2)(iii)(B). [§63.1256(g)(9)(i)(A)]
- (2) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater is designated as an affected wastewater as specified in §63.1256(a)(1)(ii). Dilution shall not be used to achieve compliance with this option. [§63.1256(g)(9)(i)(B)]
- ii) Percent mass removal/destruction option. The permittee shall reduce the mass of total soluble HAP by 90 percent or more, either by removal or destruction. The removal/destruction efficiency shall be determined by the procedures in §63.1257(e)(2)(ii) or (e)(2)(iii)(C) for noncombustion, nonbiological treatment processes; §63.1257(e)(2)(ii) or (e)(2)(iii)(D) for combustion processes; §63.1257(e)(2)(iii)(F) for open biological treatment processes; and §63.1257(e)(2)(ii) or (e)(2)(iii)(G) for closed, biological treatment processes. [§63.1256(g)(9)(ii)]
- j) Control option: Enhanced biotreatment for wastewater containing soluble HAP. The permittee may elect to treat affected wastewater streams containing soluble HAP in an enhanced biological treatment system, as defined in §63.1251, provided the wastewater stream contains less than 50 ppmw partially soluble HAP, or the permittee complies with the requirements of §63.1256(g)(8) before treating the affected wastewater stream in the enhanced biological treatment system. This option shall not be used when the wastewater is designated as an affected wastewater as

- specified in §63.1256(a)(1)(ii). These treatment processes are exempt from the design evaluation or performance tests requirements specified in §63.1256(g)(4). [§63.1256(g)(10)]
- k) 95-percent mass reduction option, for biological treatment processes. If using biological treatment for any affected wastewater, the permittee shall reduce the mass of total soluble and partially soluble HAP sent to that biological treatment unit by at least 95 percent. All wastewater as defined in §63.1251 entering such a biological treatment unit from PMPU's subject to MACT GGG shall be included in the demonstration of the 95-percent mass removal. The permittee shall comply with §63.1256(g)(11)(i) through (iv). [§63.1256(g)(11)]
- i) Except as provided in §63.1256(g)(11)(iv), the permittee shall ensure that all wastewater from PMPU's subject to MACT GGG entering a biological treatment unit are treated to destroy at least 95-percent total mass of all soluble and partially soluble HAP compounds. [§63.1256(g)(11)(i)]
- ii) For open biological treatment processes, compliance shall be determined using the procedures specified in §63.1257(e)(2)(iii)(E). For closed aerobic biological treatment processes, compliance shall be determined using the procedures specified in §63.1257(e)(2)(ii), (iii)(E), or (iii)(G). For closed anaerobic biological treatment processes, compliance shall be determined using the procedures specified in §63.1257(e)(2)(ii) or (iii)(G). [§63.1256(g)(11)(ii)]
- iii) For each treatment process or waste management unit that receives, manages, or treats wastewater subject to this paragraph, from the POD to the biological treatment unit, the permittee shall comply with §63.1256(b) through (f) for control of air emissions. When complying with this paragraph, the term affected wastewater in §63.1256(b) through (f) shall mean all wastewater from PMPU's, not just affected wastewater. [§63.1256(g)(11)(iii)]
- iv) If wastewater is in compliance with the requirements in §63.1256(g)(8), (9), or (12) before entering the biological treatment unit, the HAP mass of that wastewater is not required to be included in the total mass flow rate entering the biological treatment unit for the purpose of demonstrating compliance. [§63.1256(g)(11)(iv)]
- l) Percent mass removal/destruction option for soluble HAP compounds at new sources. The permittee shall reduce, by removal or destruction, the mass flow rate of total soluble HAP from affected wastewater by 99 percent or more. The removal/destruction efficiency shall be determined by the procedures in §63.1257(e)(2)(ii) or (iii)(C) for noncombustion, nonbiological treatment processes; §63.1257(e)(2)(ii) and (iii)(D) for combustion processes; §63.1257(e)(2)(iii)(F) for open biological treatment processes; and §63.1257(e)(2)(ii) or (iii)(G) for closed biological treatment processes. [§63.1256(g)(12)]
- m) Treatment in a RCRA unit option. The permittee shall treat the affected wastewater or residual in a unit identified in, and complying with, §63.1256(g)(13)(i), (ii), or (iii). These units are exempt from the design evaluation or performance tests requirements specified in §63.1256(g)(4) and §63.1257(e)(2), and from the monitoring requirements specified in §63.1256(a)(2)(iii), as well as recordkeeping and reporting requirements associated with monitoring and performance tests. [§63.1256(g)(13)]
- i) The wastewater or residual is discharged to a hazardous waste incinerator for which the permittee has been issued a final permit under 40 CFR Part 270 and complies with the requirements of 40 CFR Part 264, Subpart O, or has certified compliance with the interim status requirements of 40 CFR Part 265, Subpart O; [§63.1256(g)(13)(i)]
- ii) The wastewater or residual is discharged to an underground injection well for which the permittee has been issued a final permit under 40 CFR Part 270 or 40 CFR Part 144 and complies with the requirements of 40 CFR Part 122. The permittee shall comply with all

- applicable requirements of MACT GGG prior to the point where the wastewater enters the underground portion of the injection well. [§63.1256(g)(13)(iii)]
- n) Residuals. For each residual removed from affected wastewater, the permittee shall control for air emissions by complying with §63.1256(b) through (f) and by complying with one of the provisions in §63.1256(g)(14)(i) through (iv). [§63.1256(g)(14)]
 - i) Recycle the residual to a production process or sell the residual for the purpose of recycling. Once a residual is returned to a production process, the residual is no longer subject to §63.1256. [§63.1256(g)(14)(i)]
 - ii) Return the residual to the treatment process. [§63.1256(g)(14)(ii)]
 - iii) Treat the residual to destroy the total combined mass flow rate of soluble and/or partially soluble HAP compounds by 99 percent or more, as determined by the procedures specified in §63.1257(e)(2)(iii)(C) or (D). [§63.1256(g)(14)(iii)]
 - iv) Comply with the requirements for RCRA treatment options specified in §63.1256(g)(13). [§63.1256(g)(14)(iv)]
8. Control devices. For each control device or combination of control devices used to comply with the provisions in §63.1256(b) through (f) and (g)(5), the permittee shall operate and maintain the control device or combination of control devices in accordance with the requirements of §63.1256(h)(1) through (5). [§63.1256(h)]
- a) Whenever organic HAP emissions are vented to a control device which is used to comply with the provisions of MACT GGG, such control device shall be operating. [§63.1256(h)(1)]
 - b) The control device shall be designed and operated in accordance with §63.1256(h)(2)(i), (ii), (iii), (iv), or (v), as demonstrated by the provisions in §63.1257(e)(3). [§63.1256(h)(2)]
 - i) An enclosed combustion device (including but not limited to a vapor incinerator) shall meet the conditions in §63.1256(h)(2)(i)(A), (B), or (C), alone or in combination with other control devices. [§63.1256(h)(2)(i)]
 - (1) Reduce the organic HAP emissions vented to the control device by 95 percent by weight or greater; [§63.1256(h)(2)(i)(A)]
 - (2) Achieve an outlet TOC concentration of 20 ppmv on a dry basis corrected to three percent oxygen. The permittee shall use either Method 18 of NSPS Appendix A, or any other method or data that has been validated according to the applicable procedures in Method 301 of MACT Appendix A; or [§63.1256(h)(2)(i)(B)]
 - (3) Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760°C. [§63.1256(h)(2)(i)(C)]
 - ii) A vapor recovery system (including but not limited to a carbon adsorption system or condenser), alone or in combination with other control devices, shall reduce the organic HAP emissions vented to the control device by 95 percent by weight or greater or achieve an outlet TOC concentration of 20 ppmv. The 20 ppmv performance standard is not applicable to compliance with the provisions of §63.1256(c) or (d). [§63.1256(h)(2)(ii)]
 - iii) A scrubber, alone or in combination with other control devices, shall reduce the organic HAP emissions in such a manner that 95 weight-percent is either removed, or destroyed by chemical reaction with the scrubbing liquid, or achieve an outlet TOC concentration of 20 ppmv. The 20 ppmv performance standard is not applicable to compliance with the provisions of §63.1256(c) or (d). [§63.1256(h)(2)(iv)]
 - iv) Any other control device used shall, alone or in combination with other control devices, reduce the organic HAP emissions vented to the control device by 95 percent by weight or greater or achieve an outlet TOC concentration of 20 ppmv. The 20 ppmv performance

standard is not applicable to compliance with the provisions of §63.1256(c) or (d).
 [§63.1256(h)(2)(v)]

- c) If the control device is a combustion device, the permittee shall comply with the requirements in §63.1252(g) to control halogenated vent streams. [§63.1256(h)(3)]
 - d) Except as provided in §63.1256(i), if gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to covers and control devices during an inspection, a first effort to repair shall be made as soon as practical but no later than five calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect. [§63.1256(h)(4)]
 - e) The provisions in §63.1256(h)(1) through (4) apply at all times, except as specified in §63.1250(g). The permittee may not comply with the planned routine maintenance provisions in §63.1252(h) for vent streams from waste management units. [§63.1256(h)(5)]
9. Delay of repair. Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the repair is technically infeasible without a shutdown, as defined in §63.1251, or if the permittee determines that emissions of purged material from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of this equipment shall occur by the end of the next shutdown. [§63.1256(i)]
- a) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the equipment is emptied or is no longer used to treat or manage affected wastewater or residuals removed from affected wastewater. [§63.1256(i)(1)]
 - b) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified is also allowed if additional time is necessary due to the unavailability of parts beyond the control of the permittee. Repair shall be completed as soon as practical. The owner or operator who uses this provision shall comply with the requirements of §63.1259(h) to document the reasons that the delay of repair was necessary. [§63.1256(i)(2)]

Table 2 to MACT GGG – Partially Soluble HAP

1,1,1-Trichloroethane (methyl chloroform)	Dichloroethyl ether	Acetaldehyde
1,1,2,2-Tetrachloroethane	Dinitrophenol	Acrolein
1,1,2-Trichloroethane	Epichlorohydrin	Acrylonitrile
1,1-Dichloroethylene (vinylidene chloride)	Ethyl acrylate	Allyl chloride
1,2-Dibromoethane	Ethylbenzene	Benzene
1,2-Dichloroethane (ethylene dichloride)	Ethylene oxide	Benzyl chloride
1,2-Dichloropropane	Hexachlorobenzene	Biphenyl
1,3-Dichloropropene	Hexachlorobutadiene	Xylene (p)
2,4,5-Trichlorophenol	Hexachloroethane	N-hexane
2-Butanone (MEK)	Methyl methacrylate	Xylene (o)
1,4-Dichlorobenzene	Methyl-t-butyl ether	Vinyl acetate
2-Nitropropane	Methylene chloride	Vinyl chloride
4-Methyl-2-pentanone (MIBK)	N,N-dimethylaniline	Xylene (m)
Bromoform (tribromomethane)	Propionaldehyde	Styrene
Bromomethane	Propylene oxide	Toluene
Butadiene	Tetrachloroethene (perchloroethylene)	Chloroform
Carbon disulfide	Tetrachloromethane (carbon tetrachloride)	Chloromethane
Chlorobenzene	Trimethylpentane	Chloroprene
Chloroethane (ethyl chloride)	Trichlorobenzene (1,2,4-)	Cumene
Trichloroethylene		

Table 3 to MACT GGG – Soluble HAP

1,1-Dimethylhydrazine.	Dimethyl sulfate.	Isophorone.
1,4-Dioxane.	Dinitrotoluene.	Methanol (methyl alcohol).
Acetonitrile.	Ethylene glycol dimethyl ether.	Nitrobenzene.
Acetophenone.	Ethylene glycol monobutyl ether acetate.	Toluidene.
Diethyl sulfate.	Ethylene glycol monomethyl ether acetate.	Triethylamine.

Table 6 to MACT GGG – Wastewater – Compliance Options for Wastewater Tanks

Capacity (m ³)	Maximum true vapor pressure (kPa)	Control requirements
<75		§63.1256(b)(1).
>75 and <151	<13.1	§63.1256(b)(1).
	>13.1	§63.1256(b)(2).
>151	<5.2	§63.1256(b)(1).
	>5.2	§63.1256(b)(2).

Test Methods and Compliance Procedures:

1. General. Except as specified in §63.1257(a)(5), the procedures specified in §63.1257(c), (d), (e), and (f) are required to demonstrate initial compliance with §§63.1253, 63.1254, 63.1256, and 63.1252(e), respectively. The provisions in §63.1257(a)(2) and (3) apply to performance tests that are specified in §63.1257(c), (d), and (e). The provisions in §63.1257(a)(5) are used to demonstrate initial compliance with the alternative standards specified in §§63.1253(d) and 63.1254(c). The provisions in §63.1257(a)(6) are used to comply with the outlet concentration requirements specified in §§63.1253(c), 63.1254(a)(2)(i), and (a)(3)(ii)(B), 63.1254(b)(i), and 63.1256(h)(2). Performance tests shall be conducted under such conditions representative of performance of the affected source for the period being tested. Upon request, the permittee shall make available to the Director such records as may be necessary to determine the conditions of performance tests. [§63.1257(a)]
 - a) Design evaluation. To demonstrate that a control device meets the required control efficiency, a design evaluation shall address the composition and organic HAP concentration of the vent stream entering the control device. A design evaluation also shall address other vent stream characteristics and control device operating parameters as specified in any one of §63.1257(a)(1) (i) through (vi), depending on the type of control device that is used. If the vent stream is not the only inlet to the control device, the efficiency demonstration also shall consider all other vapors, gases, and liquids, other than fuels, received by the control device. [§63.1257(a)(1)]
 - b) Calculation of TOC or total organic HAP concentration. The TOC concentration or total organic HAP concentration is the sum of the concentrations of the individual components. If compliance is being determined based on TOC, the permittee shall compute TOC for each run using Equation 6 of MACT GGG. If compliance with the wastewater provisions is being determined based on total organic HAP, the permittee shall compute total organic HAP using Equation 6 of MACT GGG, except that only the organic HAP compounds shall be summed; when determining compliance with §63.1257(e)(3)(i), only the soluble and partially soluble HAP compounds shall be summed. [§63.1257(a)(2)]
 - c) Outlet concentration correction for supplemental gases— [§63.1257(a)(3)]
 - i) Combustion devices. Except as provided in §63.1258(b)(5)(ii)(A), for a combustion device used to comply with an outlet concentration standard, the actual TOC, organic HAP, and hydrogen halide and halogen shall be corrected to three percent oxygen if supplemental gases, as defined in §63.1251, are added to the vent stream or manifold. The integrated sampling and analysis procedures of Method 3B of NSPS Appendix A, shall be used to determine the actual oxygen concentration (%O₂d). The samples shall be taken during the

- same time that the TOC or total organic HAP or hydrogen halides and halogen samples are taken. The concentration corrected to three percent oxygen (C_d) shall be computed using Equation 7A of MACT GGG. [§63.1257(a)(3)(i)]
- ii) Noncombustion devices. Except as provided in §63.1258(b)(5)(ii)(B), if a control device other than a combustion device is used to comply with a TOC, organic HAP, or hydrogen halide outlet concentration standard, the permittee shall correct the actual concentration for supplemental gases using Equation 7B of MACT GGG; process knowledge and representative operating data may be used to determine the fraction of the total flow due to supplemental gas. [§63.1257(a)(3)(ii)]
- d) Exemptions from compliance demonstrations. If using any control device specified in §63.1257(a)(4)(i) through (iv), the permittee is exempt from the initial compliance provisions in §63.1257(c), (d), and (e). [§63.1257(a)(4)]
 - i) A hazardous waste incinerator for which the permittee has been issued a final permit under 40 CFR Part 270 and complies with the requirements of 40 CFR Part 264, Subpart O, or has certified compliance with the interim status requirements of 40 CFR Part 265, Subpart O. [§63.1257(a)(4)(iv)]
 - e) Initial compliance with alternative standard. Initial compliance with the alternative standards in §§63.1253(d) and 63.1254(c) for combustion devices is demonstrated when the outlet TOC concentration is 20 ppmv or less, and the outlet hydrogen halide and halogen concentration is 20 ppmv or less. Initial compliance with the alternative standards in §§63.1253(d) and 63.1254(c) for noncombustion devices is demonstrated when the outlet TOC concentration is 50 ppmv or less, and the outlet hydrogen halide and hydrogen concentration is 50 ppmv or less. To demonstrate initial compliance, the permittee shall be in compliance with the monitoring provisions in §63.1258(b)(5) on the initial compliance date. The permittee shall use Method 18 to determine the predominant organic HAP in the emission stream if the TOC monitor is calibrated on the predominant HAP. [§63.1257(a)(5)]
 - f) Initial compliance with the 20 ppmv outlet limit. Initial compliance with the 20 ppmv TOC and hydrogen halide and halogen concentration is demonstrated when the outlet TOC concentration is 20 ppmv or less, and the outlet hydrogen halide and halogen concentration is 20 ppmv or less. To demonstrate initial compliance, the operator shall use test methods described in §63.1257(b). The permittee shall comply with the monitoring provisions in §63.1258(b)(1) through (4) on the initial compliance date. [§63.1257(a)(6)]
- 2. The permittee shall follow the test methods and procedures as specified in §63.1257(b).
 - 3. Initial compliance with storage tank provisions. The permittee shall demonstrate initial compliance with §63.1253(b) or (c), as applicable, by fulfilling the requirements of §63.1257(c)(1), or (c)(2), or (c)(3). [§63.1257(c)]
 - a) Performance test. If this option is chosen to demonstrate initial compliance with the percent reduction requirement of §63.1253(b)(1) or (c)(1)(i), the efficiency of the control device shall be calculated using performance test data as specified in §63.1257(c)(1)(i) through (iii). To demonstrate initial compliance with the outlet concentration requirements in §63.1253(b)(2) and (c)(2), the permittee shall conduct a performance test and fulfill the requirements of §63.1257(a)(6). [§63.1257(c)(1)]
 - i) Equations 8 and 9 of MACT GGG shall be used to calculate the mass rate of total HAP reasonably expected maximum filling rate at the inlet and outlet of the control device for standard conditions of 20°C. [§63.1257(c)(1)(i)]
 - ii) The percent reduction in total HAP shall be calculated using Equation 10 of MACT GGG. [§63.1257(c)(1)(ii)]

- iii) A performance test is not required to be conducted if the control device used to comply with §63.1253 (storage tank provisions) is also used to comply with §63.1254 (process vent provisions), and compliance with §63.1254 has been demonstrated in accordance with §63.1257(d). [§63.1257(c)(1)(iii)]
- b) Design evaluation. If this option is chosen to demonstrate initial compliance with the percent reduction requirement of §63.1253(b) or (c), a design evaluation shall be prepared in accordance with the provisions in §63.1257(a)(1). The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during reasonably expected maximum filling rate. [§63.1257(c)(2)]
- c) Floating roof. If the permittee chooses to comply with the provisions of §63.1253(b) or (c) by installing a floating roof, the permittee shall comply with the procedures described in §§63.119(b), (c), (d), and 63.120(a), (b), and (c), with the differences noted in §63.1257(c)(3)(i) through (v) for the purposes of MACT GGG. [§63.1257(c)(3)]
 - i) When the term “storage vessel” is used in §§63.119 and 63.120, the definition of “storage tank” in §63.1251 shall apply for the purposes of MACT GGG. [§63.1257(c)(3)(i)]
 - ii) When December 31, 1992 is referred to in §63.119, April 2, 1997 shall apply instead for the purposes of MACT GGG. [§63.1257(c)(3)(ii)]
 - iii) When April 22, 1994 is referred to in §63.119, September 21, 1998 shall apply instead for the purposes of MACT GGG. [§63.1257(c)(3)(iii)]
 - iv) When the phrase “the compliance date specified in §63.100” is referred to in §63.120, the phrase “the compliance date specified in §63.1250” shall apply for the purposes of MACT GGG. [§63.1257(c)(3)(iv)]
 - v) When the phrase “the maximum true vapor pressure of the total organic HAP's in the stored liquid falls below the values defining Group 1 storage vessels specified in Table 5 or Table 6 MACT G” is referred to in §63.120(b)(1)(iv), the phrase “the maximum true vapor pressure of the total organic HAP in the stored liquid falls below 13.1 kPa” shall apply for the purposes of MACT GGG. [§63.1257(c)(3)(v)]
- d) Initial compliance with alternative standard. Initial compliance with §63.1253(d) is demonstrated by fulfilling the requirements of §63.1257(a)(5). [§63.1257(c)(4)]
- e) Planned maintenance. The permittee shall demonstrate compliance with the requirements of §63.1253(e) by including the periods of planned routine maintenance specified by date and time in each Periodic Report required by §63.1260. [§63.1257(c)(5)]
- 4. Initial compliance with process vent provisions. The permittee shall demonstrate compliance using the procedures described in §63.1257(d)(1) through (4). [§63.1257(d)]
 - a) Except as provided in §63.1257(a)(4), initial compliance with the process vent standards in §63.1254 shall be demonstrated using the procedures specified in §63.1257(d)(1)(i) through (iv), as applicable. [§63.1257(d)(1)]
 - i) Initial compliance with §63.1254(a)(2)(i) is demonstrated when the actual emissions of HAP from the sum of all process vents within a process is less than or equal to 900 kg/yr. Initial compliance with §63.1254(a)(2)(ii) is demonstrated when the actual emissions of HAP from the sum of all process vents in compliance with §63.1254(a)(2)(i) is less than or equal to 1,800 kg/yr. Uncontrolled HAP emissions and controlled HAP emissions shall be determined using the procedures described in §63.1257(d)(2) and (3). Controlled emissions during periods of planned routine maintenance of a CCGD as specified in §63.1252(h), shall be calculated assuming the HAP emissions are reduced by 93 percent. [§63.1257(d)(1)(i)]
 - ii) Initial compliance with the percent reduction requirements in §63.1254(a)(1)(i), (a)(3), and (b) is demonstrated by: [§63.1257(d)(1)(ii)]

- (1) Determining controlled HAP emissions using the procedures described in §63.1257(d)(3), and uncontrolled HAP emissions determined using the procedures described in §63.1257(d)(2), and demonstrating that the reductions required by §63.1254(a)(1)(i), (a)(3), and (b) are met; or [§63.1257(d)(1)(ii)(A)]
- (2) Controlling the process vents using a device meeting the criteria specified in §63.1257(a)(4). [§63.1257(d)(1)(ii)(B)]
- iii) Initial compliance with the outlet concentration requirements in §63.1254(a)(1)(ii)(A), (a)(3), and (b)(1) is demonstrated when the outlet TOC concentration is 20 ppmv or less and the outlet hydrogen halide and halogen concentration is 20 ppmv or less. The permittee shall demonstrate compliance by fulfilling the requirements in §63.1257(a)(6). [§63.1257(d)(1)(iii)]
- iv) Initial compliance with §63.1254(c) is demonstrated by fulfilling the requirements of §63.1257(a)(5). [§63.1257(d)(1)(iv)]
- b) Uncontrolled emissions. If complying with the emission limitation required by §63.1254(a)(1), or emissions reductions specified in §63.1254(a)(2), (a)(3), or (b), for each process vent within a process, the permittee shall calculate uncontrolled emissions from all equipment in the process according to the procedures described in §63.1257(d)(2)(i) or (ii), as appropriate. [§63.1257(d)(2)]
 - i) Emission estimation procedures. The permittee shall determine uncontrolled emissions of HAP using measurements and/or calculations for each batch emission episode within each unit operation according to the engineering evaluation methodology in §63.1257(d)(2)(i)(A) through (H). Except where variations are noted, individual HAP partial pressures in multicomponent systems shall be determined by the following methods: If the components are miscible in one another, use Raoult's law to calculate the partial pressures; if the solution is a dilute aqueous mixture, use Henry's law to calculate partial pressures; if Raoult's law or Henry's law are not appropriate or available, use experimentally obtained activity coefficients or models such as the group-contribution models, to predict activity coefficients, or assume the components of the system behave independently and use the summation of all vapor pressures from the HAP as the total HAP partial pressure. Chemical property data can be obtained from standard reference texts. [§63.1257(d)(2)(i)]
- (1) Vapor displacement. Emissions from vapor displacement due to transfer of material shall be calculated using Equation 11 of MACT GGG. The individual HAP partial pressures may be calculated using Raoult's law. [§63.1257(d)(2)(i)(A)]
- (2) Purging. Emissions from purging shall be calculated using Equation 12 of MACT GGG. The partial pressures of individual condensable compounds may be calculated using Raoult's law, the pressure of the vessel vapor space may be set equal to 760 mmHg, and the partial pressure of HAP shall be assumed to be 25 percent of the saturated value if the purge flow rate is greater than 100 standard cubic feet per minute (scfm). [§63.1257(d)(2)(i)(B)]
- (3) Heating. Emissions caused by the heating of a vessel to a temperature equal to or lower than 10 K below the boiling point shall be calculated using the procedures in either §63.1257(d)(2)(i)(C)(1) or (3). Emissions caused by heating a vessel to a temperature that is higher than 10 K below the boiling point and less than the boiling point, shall be calculated using the procedures in either §63.1257(d)(2)(i)(C)(2) or (3). If the contents of a vessel are heated to the boiling point, emissions shall be calculated using the procedures in §63.1257(d)(2)(i)(C)(4). [§63.1257(d)(2)(i)(C)]

- (a) This paragraph describes procedures to calculate emissions if the final temperature to which the vessel contents are heated is 10 K below the boiling point of the HAP in the vessel, or lower. The permittee shall calculate the mass of HAP emitted per episode using either Equation 13 or 14 of MACT GGG. The moles of noncondensable gas displaced are calculated using Equation 15 of MACT GGG. The initial and final pressure of the noncondensable gas in the vessel shall be calculated using Equation 16 of MACT GGG. The average molecular weight of HAP in the displaced gas shall be calculated using Equation 17 of MACT GGG. [§63.1257(d)(2)(i)(C)(1)]
- (b) If the vessel contents are heated to a temperature that is higher than 10 K below the boiling point and less than the boiling point, emissions shall be calculated using the procedures in §63.1257(d)(2)(i)(C)(2)(i), or (ii), or (iii). [§63.1257(d)(2)(i)(C)(2)]
- (i) Use Equation 13 of MACT GGG. In Equation 13 of MACT GGG, the HAP vapor pressures shall be determined at the temperature 10 K below the boiling point. In the calculation of $\Delta\eta$ for Equation 13 of MACT GGG, T_2 shall be the temperature 10 K below the boiling point, and Pa_2 shall be determined at the temperature 10 K below the boiling point. [§63.1257(d)(2)(i)(C)(2)(i)]
- (ii) Use Equation 14 of MACT GGG. In Equation 14 of MACT GGG, the HAP partial pressures shall be determined at the temperature 10 K below the boiling point. In the calculation of $\Delta\eta$ for Equation 14 of MACT GGG, T_2 shall be the temperature 10 K below the boiling point, and Pa_2 shall be determined at the temperature 10 K below the boiling point. In the calculation of MW_{HAP} , the HAP partial pressures shall be determined at the temperature 10 K below the boiling point. [§63.1257(d)(2)(i)(C)(2)(ii)]
- (iii) Use Equation 14 of MACT GGG over specific temperature increments. If the initial temperature is lower than 10 K below the boiling point, emissions shall be calculated as the sum over two increments; one increment is from the initial temperature to 10 K below the boiling point, and the second is from 10 K below the boiling point to the lower of either the final temperature or the temperature 5 K below the boiling point. If the initial temperature is higher than 10 K below the boiling point, emissions are calculated over one increment from the initial temperature to the lower of either the final temperature or the temperature 5 K below the boiling point. [§63.1257(d)(2)(i)(C)(2)(iii)]
- (iv) Emissions caused by heating a vessel are calculated using Equation 18 of MACT GGG. [§63.1257(d)(2)(i)(C)(3)(i)]
- (v) The average gas space molar volume during the heating process is calculated using Equation 19 of MACT GGG. [§63.1257(d)(2)(i)(C)(3)(ii)]
- (vi) The difference in the number of moles of condensable in the vessel headspace between the initial and final temperatures is calculated using Equation 20 of MACT GGG. [§63.1257(d)(2)(i)(C)(3)(iii)]
- (c) If the vessel contents are heated to the boiling point, emissions shall be calculated using the procedure in §63.1257(d)(2)(i)(C)(4)(i) and (ii). [§63.1257(d)(2)(i)(C)(4)]
- (i) Use either of the procedures in §63.1257(d)(3)(i)(B)(3) to calculate the emissions from heating to the boiling point (note that $Pa_2=0$ in the calculation of $\Delta\eta$); and [§63.1257(d)(2)(i)(C)(4)(i)]
- (ii) While boiling, the vessel shall be operated with a properly operated process condenser. An initial demonstration that a process condenser is properly operated

- is required for some process condensers, as described in §63.1257(d)(3)(iii).
[§63.1257(d)(2)(i)(C)(4)(ii)]
- (4) Depressurization. Emissions from depressurization shall be calculated using the procedures in either §63.1257(d)(2)(i)(D)(1) through (4), §63.1257(d)(2)(i)(D)(5) through (9), or §63.1257(d)(2)(i)(D)(10). [§63.1257(d)(2)(i)(D)]
- (a) Equations 21 and 22 of MACT GGG are used to calculate the initial and final volumes of noncondensable gas present in the vessel, adjusted to atmospheric pressure. The HAP partial pressures may be calculated using Raoult's law.
[§63.1257(d)(2)(i)(D)(1)]
- (b) The initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 23 and 24 of MACT GGG. [§63.1257(d)(2)(i)(D)(2)]
- (c) The average ratio of moles of noncondensable to moles of an individual HAP in the emission stream is calculated using Equation 25 of MACT GGG; this calculation shall be repeated for each HAP in the emission stream: [§63.1257(d)(2)(i)(D)(3)]
- (d) The mass of HAP emitted shall be calculated using Equation 26 of MACT GGG.
[§63.1257(d)(2)(i)(D)(4)]
- (e) The moles of HAP vapor initially in the vessel are calculated using the ideal gas law using Equation 27 of MACT GGG. [§63.1257(d)(2)(i)(D)(5)]
- (f) The initial and final moles of noncondensable gas present in the vessel are calculated using Equations 28 and 29 of MACT GGG. [§63.1257(d)(2)(i)(D)(6)]
- (g) The initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 23 and 24 of MACT GGG. [§63.1257(d)(2)(i)(D)(7)]
- (h) The moles of HAP emitted during the depressurization are calculated by taking an approximation of the average ratio of moles of HAP to moles of noncondensable and multiplying by the total moles of noncondensables released during the depressurization, using Equation 30 of MACT GGG. [§63.1257(d)(2)(i)(D)(8)]
- (i) The mass of HAP emitted can be calculated using Equation 31 of MACT GGG.
[§63.1257(d)(2)(i)(D)(9)]
- (j) Emissions from depressurization may be calculated using Equation 32 of MACT GGG. [§63.1257(d)(2)(i)(D)(10)]
- (5) Vacuum systems. Emissions from vacuum systems may be calculated using Equation 33 of MACT GGG if the air leakage rate is known or can be approximated. The individual HAP partial pressures may be calculated using Raoult's Law. [§63.1257(d)(2)(i)(E)]
- (6) Gas evolution. Emissions from gas evolution shall be calculated using Equation 12 of MACT GGG with V calculated using Equation 34 of MACT GGG.
[§63.1257(d)(2)(i)(F)]
- (7) Air drying. Emissions from air drying shall be calculated using Equation 35 of MACT GGG. [§63.1257(d)(2)(i)(G)]
- (8) Empty vessel purging. Emissions from empty vessel purging shall be calculated using Equation 36 of MACT GGG (Note: The term $e^{-Ft/v}$ can be assumed to be 0):
[§63.1257(d)(2)(i)(H)]
- ii) Engineering assessments. The permittee shall conduct an engineering assessment to calculate uncontrolled HAP emissions for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum operations, gas evolution, or air drying. For emission episodes caused by any of these types of activities, the permittee also may calculate uncontrolled HAP emissions based on an engineering assessment if the permittee can demonstrate to the Director that the methods in §63.1257(d)(2)(i) are not

- appropriate. Modified versions of the engineering evaluation methods in §63.1257(d)(2)(i)(A) through (H) may be used if the permittee demonstrates that they have been used to meet other regulatory obligations, and they do not affect applicability assessments or compliance determinations under MACT GGG. One criterion the permittee could use to demonstrate that the methods in §63.1257(d)(2)(i) are not appropriate is if previous test data are available that show a greater than 20 percent discrepancy between the test value and the estimated value. An engineering assessment includes, but is not limited to, the following: [§63.1257(d)(2)(ii)]
- (1) Previous test results, provided the tests are representative of current operating practices at the process unit. [§63.1257(d)(2)(ii)(A)]
 - (2) Bench-scale or pilot-scale test data representative of the process under representative operating conditions. [§63.1257(d)(2)(ii)(B)]
 - (3) Maximum flow rate, HAP emission rate, concentration, or other relevant parameter specified or implied within a permit limit applicable to the process vent. [§63.1257(d)(2)(ii)(C)]
 - (4) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to: [§63.1257(d)(2)(ii)(D)]
 - (a) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations. [§63.1257(d)(2)(ii)(D)(1)]
 - (b) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities. [§63.1257(d)(2)(ii)(D)(2)]
 - (c) Estimation of HAP concentrations based on saturation conditions. [§63.1257(d)(2)(ii)(D)(3)]
 - (5) All data, assumptions, and procedures used in the engineering assessment shall be documented in accordance with §63.1260(e). Data or other information supporting a finding that the emissions estimation equations are inappropriate shall be reported in the Precompliance report. [§63.1257(d)(2)(ii)(E)]
- c) Controlled emissions. The permittee shall determine controlled emissions using the procedures in either §63.1257(d)(3)(i) or (ii). [§63.1257(d)(3)]
- i) Small control devices. Except for condensers, controlled emissions for each process vent that is controlled using a small control device shall be determined by using the design evaluation described in §63.1257(d)(3)(i)(A), or conducting a performance test in accordance with §63.1257(d)(3)(ii). Whenever a small control device becomes a large control device, the permittee shall comply with the provisions in §63.1257(d)(3)(ii) and submit the test report in the next Periodic report. [§63.1257(d)(3)(i)]
 - (1) Design evaluation. The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency under worst-case conditions, as determined from the emission profile described in §63.1257(b)(8)(ii). The control efficiency determined from this design evaluation shall be applied to uncontrolled emissions to estimate controlled emissions. The documentation shall be conducted in accordance with the provisions in §63.1257(a)(1). The design evaluation shall also include the value(s) and basis for the parameter(s) monitored under §63.1258. [§63.1257(d)(3)(i)(A)]
 - (2) Emission estimation equations. If using a condenser as a control device, the permittee shall determine controlled emissions using exhaust gas temperature measurements and calculations for each batch emission episode within each unit operation according to the

- engineering methodology in §63.1257(d)(3)(i)(B)(1) through (8). Individual HAP partial pressures shall be calculated as specified in §63.1257(d)(2)(i). [§63.1257(d)(3)(i)(B)]
- (a) Emissions from vapor displacement shall be calculated using Equation 11 of MACT GGG with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver. [§63.1257(d)(3)(i)(B)(1)]
 - (b) Emissions from purging shall be calculated using Equation 12 of MACT GGG with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver. [§63.1257(d)(3)(i)(B)(2)]
 - (c) Emissions from heating shall be calculated using either Equation 13 of MACT GGG or Equation 37 of MACT GGG. In Equation 13, the HAP vapor pressures shall be determined at the temperature of the receiver. In Equations 13 and 37 of MACT GGG, Δn is equal to the number of moles of noncondensable displaced from the vessel, as calculated using Equation 15 of MACT GGG. In Equations 13 and 37 of MACT GGG, the HAP average molecular weight shall be calculated using Equation 17 with the HAP partial pressures determined at the temperature of the receiver. [§63.1257(d)(3)(i)(B)(3)]
 - (d) Emissions from depressurization shall be calculated using Equation 38 of MACT GGG. [§63.1257(d)(3)(i)(B)(4)(i)]
 - (e) The initial and final volumes of noncondensable gas present in the vessel, adjusted to the pressure of the receiver, are calculated using Equations 39 and 40 of MACT GGG. [§63.1257(d)(3)(i)(B)(4)(ii)]
 - (f) Initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 41 and 42 of MACT GGG. [§63.1257(d)(3)(i)(B)(4)(iii)]
 - (g) Emissions from vacuum systems shall be calculated using Equation 33 of MACT GGG. [§63.1257(d)(3)(i)(B)(5)]
 - (h) Emissions from gas evolution shall be calculated using Equation 12 with V calculated using Equation 34 of MACT GGG, T set equal to the receiver temperature, and the HAP partial pressures determined at the receiver temperature. The term for time, t, in Equation 12 of MACT GGG is not needed for the purposes of this calculation. [§63.1257(d)(3)(i)(B)(6)]
 - (i) Emissions from air drying shall be calculated using Equation 11 of MACT GGG with V equal to the air flow rate and P_i determined at the receiver temperature. [§63.1257(d)(3)(i)(B)(7)]
 - (j) Emissions from empty vessel purging shall be calculated using Equation 43 of MACT GGG. [§63.1257(d)(3)(i)(B)(8)]
- ii) Large control devices. Except for condensers, controlled emissions for each process vent that is controlled using a large control device shall be determined by applying the control efficiency of the large control device to the estimated uncontrolled emissions. The control efficiency shall be determined by conducting a performance test on the control device as described in §63.1257(d)(3)(ii)(A) through (C), or by using the results of a previous performance test as described in §63.1257(d)(4). If the control device is intended to control only hydrogen halides and halogens, the permittee may assume the control efficiency of organic HAP is zero percent. If the control device is intended to control only organic HAP, the permittee may assume the control efficiency for hydrogen halides and halogen is zero percent. The permittee is not required to conduct performance tests for devices described in §63.1257(a)(4) and (d)(4) that are large control devices, as defined in §63.1251. [§63.1257(d)(3)(ii)]

- (1) The performance test shall be conducted by performing emission testing on the inlet and outlet of the control device following the test methods and procedures of §63.1257(b). Concentrations shall be calculated from the data obtained through emission testing according to the procedures in §63.1257(a)(2). [§63.1257(d)(3)(ii)(A)]
 - (2) Performance testing shall be conducted under absolute, or hypothetical worst-case conditions, as defined in §63.1257(b)(8)(i)(A) through (B). [§63.1257(d)(3)(ii)(B)]
 - (3) The permittee may elect to conduct more than one performance test on the control device for the purpose of establishing more than one operating condition at which the control device achieves the required control efficiency. [§63.1257(d)(3)(ii)(C)]
 - iii) Initial compliance demonstration for condensers— [§63.1257(d)(3)(iii)]
 - (1) Air pollution control devices. During periods in which a condenser functions as an air pollution control device, controlled emissions shall be calculated using the emission estimation equations described in §63.1257(d)(3)(i)(B). [§63.1257(d)(3)(iii)(A)]
 - (2) Process condensers. During periods when the condenser is operating as a process condenser, the permittee is required to demonstrate that the process condenser is properly operated if the process condenser meets either of the criteria described in §63.1257(d)(3)(iii)(B)(1) and (2). The permittee shall either measure the condenser exhaust gas temperature and show it is less than the boiling or bubble point of the substance(s) in the vessel, or perform a material balance around the vessel and condenser to show that at least 99 percent of the material vaporized while boiling is condensed. The initial demonstration shall be conducted for all appropriate operating scenarios and documented in the Notification of Compliance Status report described in §63.1260(f). [§63.1257(d)(3)(iii)(B)]
 - (a) The process condenser is not followed by an air pollution control device; or [§63.1257(d)(3)(iii)(B)(1)]
 - (b) The air pollution control device following the process condenser is not a condenser or is not meeting the alternative standard of §63.1254(c). [§63.1257(d)(3)(iii)(B)(2)]
 - d) The permittee is not required to conduct a performance test for the following: [§63.1257(d)(4)]
 - i) Any control device for which a previous performance test was conducted, provided the test was conducted using the same procedures specified in §63.1257(b) over conditions typical of the appropriate worst-case, as defined in §63.1257(b)(8)(i). The results of the previous performance test shall be used to demonstrate compliance. [§63.1257(d)(4)(i)]
5. Compliance with wastewater provisions— [§63.1257(e)]
- a) Determining annual average concentration and annual load. To determine the annual average concentration and annual load of partially soluble and/or soluble HAP compounds in a wastewater stream, as required by §63.1256(a)(1), the permittee shall comply with the provisions in §63.1257(e)(1)(i) through (iii). A wastewater stream is exempt from the requirements of §63.1256(a)(2) if the permittee determines the annual average concentration and annual load are below all of the applicability cutoffs specified in §63.1256(a)(1)(i)(A) through (D). For annual average concentration, only initial rinses are included. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific F_m factor listed in Table 8 of MACT GGG. Concentration measurements based on methods other than Method 305 may not be adjusted by the compound-specific F_m factor listed in Table 8 of MACT GGG. [§63.1257(e)(1)]
 - i) Annual average concentration definition. [§63.1257(e)(1)(i)]
 - (1) When complying with §63.1256(a)(1)(i)(A), the annual average concentration means the total mass of partially soluble HAP compounds occurring in the wastewater stream

- during the calendar year divided by the total mass of the wastewater stream discharged during the same calendar year. [§63.1257(e)(1)(i)(A)]
- (2) When complying with §63.1256(a)(1)(i)(B) or (C), the annual average concentration means the total mass of partially soluble and/or soluble HAP compounds occurring in the wastewater stream during the calendar year divided by the total mass of the wastewater stream discharged during the same calendar year. [§63.1257(e)(1)(i)(B)]
 - (3) When complying with §63.1256(a)(1)(i)(D), the annual average concentration means the total mass of soluble HAP compounds occurring in the wastewater stream during the calendar year divided by the total mass of the wastewater stream discharged during the same calendar year. [§63.1257(e)(1)(i)(C)]
- ii) Determination of annual average concentration. The permittee shall determine annual average concentrations of partially soluble and/or soluble HAP compounds in accordance with the provisions specified in §63.1257(e)(1)(ii)(A), (B), or (C). The permittee may determine annual average concentrations by process simulation. Data and other information supporting the simulation shall be reported in the Precompliance Report for approval by the Director. The annual average concentration shall be determined either at the POD or downstream of the POD with adjustment for concentration changes made according to §63.1257(e)(1)(ii)(D). [§63.1257(e)(1)(ii)]
- (1) Test methods. The concentration of partially soluble HAP, soluble HAP, or total HAP shall be measured using any of the methods described in §63.1257(b)(10)(i) through (iv). [§63.1257(e)(1)(ii)(A)]
 - (2) Knowledge of the wastewater stream. The concentration of partially soluble HAP, soluble HAP, or total HAP shall be calculated based on knowledge of the wastewater stream according to the procedures in §63.1257(e)(1)(ii)(B)(1) and (2). The permittee shall document concentrations in the Notification of Compliance Status report described in §63.1260(f). [§63.1257(e)(1)(ii)(B)]
 - (a) Mass balance. The permittee shall calculate the concentrations of HAP compounds in wastewater considering the total quantity of HAP discharged to the water, the amount of water at the POD, and the amounts of water and solvent lost to other mechanisms such as reactions, air emissions, or uptake in product or other processing materials. The quantities of HAP and water shall be based on batch sheets, manufacturing tickets, or FDA bills of materials. In cases where a chemical reaction occurs that generates or consumes HAP, the amount of HAP remaining after a reaction shall be based on stoichiometry assuming 100 percent theoretical consumption or yield, as applicable. [§63.1257(e)(1)(ii)(B)(1)]
 - (b) Published water solubility data. For single components in water, the permittee may use the water solubilities published in standard reference texts at the POD temperature to determine maximum HAP concentration. [§63.1257(e)(1)(ii)(B)(2)]
 - (3) Bench scale or pilot-scale test data. The concentration of partially soluble HAP, soluble HAP, or total HAP shall be calculated based on bench scale or pilot-scale test data. The permittee shall provide sufficient information to demonstrate that the bench-scale or pilot-scale test concentration data are representative of actual HAP concentrations. The permittee shall also provide documentation describing the testing protocol, and the means by which sample variability and analytical variability were accounted for in the determination of HAP concentrations. Documentation of the pilot-scale or bench scale analysis shall be provided in the precompliance report. [§63.1257(e)(1)(ii)(C)]

- (4) Adjustment for concentrations determined downstream of the POD. The permittee shall make corrections to the annual average concentration when the concentration is determined downstream of the POD at a location where: two or more wastewater streams have been mixed; one or more wastewater streams have been treated; or, losses to the atmosphere have occurred. The permittee shall make the adjustments either to the individual data points or to the final annual average concentration.
[§63.1257(e)(1)(ii)(D)]
- iii) Determination of annual load. The permittee shall calculate the partially soluble and/or soluble HAP load in a wastewater stream based on the annual average concentration determined in §63.1257(e)(1)(ii)(A), (B), or (C) and the total volume of the wastewater stream, based on knowledge of the wastewater stream in accordance with §63.1257(e)(1)(ii)(B). The permittee shall maintain records of the total liters of wastewater discharged per year as specified in §63.1259(b). [§63.1257(e)(1)(iii)]
- b) Compliance with treatment unit control provisions— [§63.1257(e)(2)]
- i) Performance tests and design evaluations-general. To comply with the control options in §63.1256(g)(10) or (13), neither a design evaluation nor a performance test is required. For any other nonbiological treatment process, the permittee shall conduct either a design evaluation as specified in §63.1257(e)(2)(ii) of this section, or a performance test as specified in §63.1257(e)(2)(iii) to demonstrate that each nonbiological treatment process used to comply with §63.1256(g)(8), (9), and/or (12) achieves the conditions specified for compliance. The permittee shall demonstrate by the procedures in either §63.1257(e)(2)(ii) or (iii) that each closed biological treatment process used to comply with §63.1256(g)(8)(ii), (g)(9)(ii), (g)(11), or (g)(12) achieves the conditions specified for compliance. If an open biological treatment unit is used to comply with §63.1256(g)(8)(ii), (g)(9)(ii), (g)(11), or (g)(12), the permittee shall comply with the performance test requirements in §63.1257(e)(2)(iii). [§63.1257(e)(2)(i)]
- ii) Design evaluation. A design evaluation and supporting documentation that addresses the operating characteristics of the treatment process and that is based on operation at a wastewater stream flow rate and a concentration under which it would be most difficult to demonstrate compliance. For closed biological treatment processes, the percent reduction from removal/destruction in the treatment unit and control device shall be determined by a mass balance over the unit. The mass flow rate of soluble and/or partially soluble HAP compounds exiting the treatment process shall be the sum of the mass flow rate of soluble and/or partially soluble HAP compounds in the wastewater stream exiting the biological treatment process and the mass flow rate of the vented gas stream exiting the control device. The mass flow rate entering the treatment process minus the mass flow rate exiting the process determines the actual mass removal. Compounds that meet the requirements specified in §63.1257(e)(2)(iii)(A)(4) are not required to be included in the design evaluation; the term “performance test” in §63.1257(e)(2)(iii)(A)(4) shall mean “design evaluation” for the purposes of this paragraph. [§63.1257(e)(2)(ii)]
- iii) Performance tests. Performance tests shall be conducted using test methods and procedures that meet the applicable requirements specified in §63.1257(e)(2)(iii)(A) through (G).
[§63.1257(e)(2)(iii)]
- (1) General. This paragraph specifies the general procedures for performance tests that are conducted to demonstrate compliance of a treatment process with the control requirements specified in §63.1256(g). [§63.1257(e)(2)(iii)(A)]

- (a) Representative process unit operating conditions. Compliance shall be demonstrated for representative operating conditions. Operations during periods of malfunction and periods of nonoperation shall not constitute representative conditions. The permittee shall record the process information that is necessary to document operating conditions during the test. [§63.1257(e)(2)(iii)(A)(1)]
- (b) Representative treatment process operating conditions. Performance tests shall be conducted when the treatment process is operating at a representative inlet flow rate and concentration. If the treatment process will be operating at several different sets of representative operating conditions, the permittee shall comply with §63.1257(e)(2)(iii)(A)(2)(i) and (ii). The permittee shall record information that is necessary to document treatment process or control device operating conditions during the test. [§63.1257(e)(2)(iii)(A)(2)]
- (i) Range of operating conditions. If the treatment process will be operated at several different sets of representative operating conditions, performance testing over the entire range is not required. In such cases, the performance test results shall be supplemented with modeling and/or engineering assessments to demonstrate performance over the operating range. [§63.1257(e)(2)(iii)(A)(2)(i)]
- (ii) Consideration of residence time. If concentration and/or flow rate to the treatment process are not relatively constant (i.e., comparison of inlet and outlet data will not be representative of performance), the permittee shall consider residence time, when determining concentration and flow rate. [§63.1257(e)(2)(iii)(A)(2)(ii)]
- (c) Testing equipment. All testing equipment shall be prepared and installed as specified in the applicable test methods, or as approved by the Director.
[§63.1257(e)(2)(iii)(A)(3)]
- (d) Compounds not required to be considered in performance tests. Compounds that meet the requirements specified in §63.1257(e)(2)(iii)(A)(4)(i), (ii), or (iii) are not required to be included in the performance test. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific F_m factor listed in Table 8 of MACT GGG. Concentration measurements based on methods other than Method 305 shall not be adjusted by the compound-specific F_m factor listed in Table 8 of MACT GGG. [§63.1257(e)(2)(iii)(A)(4)]
- (i) Compounds not used or produced by the PMPU; or [§63.1257(e)(2)(iii)(A)(4)(i)]
- (ii) Compounds with concentrations at the POD that are below 1 ppmw; or
[§63.1257(e)(2)(iii)(A)(4)(ii)]
- (iii) Compounds with concentrations at the POD that are below the lower detection limit where the lower detection limit is greater than 1 ppmw. The method shall be an analytical method for wastewater which has the compound of interest as a target analyte. [§63.1257(e)(2)(iii)(A)(4)(iii)]
- (e) Treatment using a series of treatment processes. In all cases where the wastewater provisions in MACT GGG allow or require the use of a treatment process to comply with emissions limitations, the permittee may use multiple treatment processes. If complying with the requirements of §63.1256(g)(7)(i), when wastewater is conveyed by hard-piping, the permittee shall comply with either §63.1257(e)(2)(iii)(A)(5)(i) or (ii). If complying with the requirements of §63.1256(g)(7)(ii), the permittee shall comply with the requirements of §63.1257(e)(2)(iii)(A)(5)(ii).
[§63.1257(e)(2)(iii)(A)(5)]

- (i) The permittee shall conduct the performance test across each series of treatment processes. For each series of treatment processes, inlet concentration and flow rate shall be measured either where the wastewater enters the first treatment process in a series of treatment processes, or prior to the first treatment process as specified in §63.1257(e)(2)(iii)(A)(6). For each series of treatment processes, outlet concentration and flow rate shall be measured where the wastewater exits the last treatment process in the series of treatment processes, except when the last treatment process is an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in §63.1257(e)(2)(iii)(E) or (F). When the last treatment process is either an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in §63.1257(e)(2)(iii)(E) or (F), inlet and outlet concentrations and flow rates shall be measured at the inlet and outlet to the series of treatment processes prior to the biological treatment process and at the inlet to the biological treatment process, except as provided in §63.1257(e)(2)(iii)(A)(6)(ii). The mass flow rate destroyed in the biological treatment process for which compliance is demonstrated using §63.1257(e)(2)(iii)(E) or (F) shall be added to the mass flow rate removed or destroyed in the series of treatment units before the biological treatment unit. This sum shall be used to calculate the overall control efficiency.
[§63.1257(e)(2)(iii)(A)(5)(i)]
- (ii) The permittee shall conduct the performance test across each treatment process in the series of treatment processes. The mass flow rate removed or destroyed by each treatment process shall be added together and the overall control efficiency calculated to determine whether compliance has been demonstrated using §63.1257(e)(2)(iii)(C), (D), (E), (F), or (G), as applicable. If a biological treatment process is one of the treatment processes in the series of treatment processes, the inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process, or the inlet to the equalization tank if all the criteria of §63.1257(e)(2)(iii)(A)(6)(ii) are met.
[§63.1257(e)(2)(iii)(A)(5)(ii)]
- (f) If determining the inlet for purposes of demonstrating compliance with §63.1257(e)(2)(iii)(E), or (F) may elect to comply with §63.1257(e)(2)(iii)(A)(6)(i) or (ii). [§63.1257(e)(2)(iii)(A)(6)]
- (i) When wastewater is conveyed exclusively by hard-piping from the point of determination to a treatment process that is either the only treatment process or the first in a series of treatment processes (i.e., no treatment processes or other waste management units are used upstream of this treatment process to store, handle, or convey the wastewater), the inlet to the treatment process shall be at any location from the point of determination to where the wastewater stream enters the treatment process. When samples are taken upstream of the treatment process and before wastewater streams have converged, the permittee shall ensure that the mass flow rate of all affected wastewater is accounted for when using §63.1256(g)(8)(ii), (g)(9)(ii) or (g)(12) to comply and that the mass flow rate of all wastewater, not just affected wastewater, is accounted for when using §63.1256(g)(11) to comply, except as provided in §63.1257(e)(2)(iii)(A)(4).
[§63.1257(e)(2)(iii)(A)(6)(i)]

- (ii) The permittee may consider the inlet to the equalization tank as the inlet to the biological treatment process if the wastewater is conveyed by hard-piping from either the last previous treatment process or the point of determination to the equalization tank; and the wastewater is conveyed from the equalization tank exclusively by hard-piping to the biological treatment process and no treatment processes or other waste management units are used to store, handle, or convey the wastewater between the equalization tank and the biological treatment process; and the equalization tank is equipped with a fixed roof and a closed-vent system that routes emissions to a control device that meets the requirements of §63.1256(b)(1)(i) through (iv) and §63.1256(b)(2)(i). The outlet from the series of treatment processes prior to the biological treatment process is the point at which the wastewater exits the last treatment process in the series prior to the equalization tank, if the equalization tank and biological treatment process are part of a series of treatment processes. The permittee shall ensure that the mass flow rate of all affected wastewater is accounted for when using §63.1256(g)(9)(ii) or (12) to comply and that the mass flow rate of all wastewater, not just affected wastewater is accounted for when using §63.1256(g)(11) to comply, except as provided in §63.1257(e)(2)(iii)(A)(4).
[§63.1257(e)(2)(iii)(A)(6)(ii)]
- (2) Noncombustion treatment process—concentration limits. This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion treatment process with the ppmw wastewater stream concentration limits at the outlet of the treatment process. This compliance option is specified in §63.1256(g)(8)(i) and (9)(i). Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.1257(b)(10)(vi). Samples shall be collected and analyzed using the procedures specified in §63.1257(b)(10)(i) through (vi). Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a one-hour period. Each one-hour period constitutes a run, and the performance test shall consist of a minimum of three runs. Concentration measurements based on methods other than Method 305 may be adjusted by multiplying each concentration by the compound-specific F_m factor listed in Table 8 of MACT GGG. (For affected wastewater streams that contains both partially soluble and soluble HAP compounds, compliance is demonstrated only if the sum of the concentrations of partially soluble HAP compounds is less than 50 ppmw, and the sum of the concentrations of soluble HAP compounds is less than 520 ppmw.) [§63.1257(e)(2)(iii)(B)]
- (3) Noncombustion, nonbiological treatment process: percent mass removal/destruction option. This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion, nonbiological treatment process with the percent mass removal limits specified in §63.1256(g)(8)(ii) and (9)(ii) for partially soluble and soluble HAP compounds, respectively. The permittee shall comply with the requirements specified in §63.1257(e)(2)(iii)(C)(1) through (5). [§63.1257(e)(2)(iii)(C)]
- (a) Concentration. The concentration of partially soluble and/or soluble HAP compounds entering and exiting the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.1257(b)(10)(vi). The method shall be an analytical

method for wastewater which has the compound of interest as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a one-hour period. Each one-hour period constitutes a run, and the performance test shall consist of a minimum of three runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific F_m factor listed in Table 8 of MACT GGG. Concentration measurements based on methods other than Method 305 shall not be adjusted by the compound-specific F_m factor listed in Table 8 of MACT GGG. [§63.1257(e)(2)(iii)(C)(1)]

- (b) Flow rate. The flow rate of the entering and exiting wastewater streams shall be determined using inlet and outlet flow meters, respectively. Where the outlet flow is not greater than the inlet flow, a single flow meter may be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements. [§63.1257(e)(2)(iii)(C)(2)]
 - (c) Calculation of mass flow rate—for noncombustion, nonbiological treatment processes. The mass flow rates of partially soluble and/or soluble HAP compounds entering and exiting the treatment process are calculated using Equations 44 and 45 of MACT GGG. [§63.1257(e)(2)(iii)(C)(3)]
 - (d) Percent removal calculation for mass flow rate. The percent mass removal across the treatment process shall be calculated using Equation 46 of MACT GGG [§63.1257(e)(2)(iii)(C)(4)]
 - (e) Compare mass removal efficiency to required efficiency. Compare the mass removal efficiency (calculated in Equation 46 of MACT GGG) to the required efficiency as specified in §63.1256(g)(8)(ii) or (9)(ii). If complying with §63.1256(g)(8)(ii), compliance is demonstrated if the mass removal efficiency is 99 percent or greater. If complying with §63.1256(g)(9)(ii), compliance is demonstrated if the mass removal efficiency is 90 percent or greater. [§63.1257(e)(2)(iii)(C)(5)]
- (4) Combustion treatment processes: percent mass removal/destruction option. This paragraph applies to performance tests that are conducted to demonstrate compliance of a combustion treatment process with the percent mass destruction limits specified in §63.1256(g)(8)(ii) for partially soluble HAP compounds, and/or §63.1256(g)(9)(ii) for soluble HAP compounds. The permittee shall comply with the requirements specified in §63.1257(e)(2)(iii)(D)(1) through (8). [§63.1257(e)(2)(iii)(D)]
- (a) Concentration in wastewater stream entering the combustion treatment process. The concentration of partially soluble and/or soluble HAP compounds entering the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.1257(b)(10)(vi). The method shall be an analytical method for wastewater which has the compound of interest as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a one-hour period. Each one-hour period constitutes a run, and the performance test shall consist of a minimum of three runs. Concentration measurements based on Method 305 of MACT Appendix A shall be adjusted by dividing each concentration by the compound-specific F_m factor listed in Table 8 of MACT GGG. Concentration measurements based on methods other than Method 305

- shall not be adjusted by the compound-specific F_m factor listed in Table 8 of MACT GGG. [§63.1257(e)(2)(iii)(D)(1)]
- (b) Flow rate of wastewater entering the combustion treatment process. The flow rate of the wastewater stream entering the combustion treatment process shall be determined using an inlet flow meter. Flow rate measurements shall be taken at the same time as the concentration measurements. [§63.1257(e)(2)(iii)(D)(2)]
 - (c) Calculation of mass flow rate in wastewater stream entering combustion treatment processes. The mass flow rate of partially soluble and/or soluble HAP compounds entering the treatment process is calculated using Equation 47 of MACT GGG. [§63.1257(e)(2)(iii)(D)(3)]
 - (d) Concentration in vented gas stream exiting the combustion treatment process. The concentration of partially soluble and/or soluble HAP compounds (or TOC) exiting the combustion treatment process in any vented gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a one-hour period. Each one-hour period constitutes a run, and the performance test shall consist of a minimum of three runs. Concentration measurements shall be determined using Method 18 of NSPS Appendix A. Alternatively, any other test method validated according to the procedures in Method 301 of MACT Appendix A may be used. [§63.1257(e)(2)(iii)(D)(4)]
 - (e) Volumetric flow rate of vented gas stream exiting the combustion treatment process. The volumetric flow rate of the vented gas stream exiting the combustion treatment process shall be determined using Method 2, 2A, 2C, or 2D of NSPS Appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements. [§63.1257(e)(2)(iii)(D)(5)]
 - (f) Calculation of mass flow rate of vented gas stream exiting combustion treatment processes. The mass flow rate of partially soluble and/or soluble HAP compounds in a vented gas stream exiting the combustion treatment process shall be calculated using Equation 48 of MACT GGG. [§63.1257(e)(2)(iii)(D)(6)]
 - (g) Destruction efficiency calculation. The destruction efficiency of the combustion unit for partially soluble and/or soluble HAP compounds shall be calculated using Equation 49 of MACT GGG. [§63.1257(e)(2)(iii)(D)(7)]
 - (h) Compare mass destruction efficiency to required efficiency. Compare the mass destruction efficiency (calculated in Equation 49 of MACT GGG) to the required efficiency as specified in §63.1256(g)(8)(ii) or (g)(9)(ii). If complying with §63.1256(g)(8)(ii), compliance is demonstrated if the mass destruction efficiency is 99 percent or greater. If complying with §63.1256(g)(9)(ii), compliance is demonstrated if the mass destruction efficiency is 90 percent or greater. [§63.1257(e)(2)(iii)(D)(8)]
- (5) Open or closed aerobic biological treatment processes: 95-percent mass destruction option. This paragraph applies to performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the 95-percent mass destruction provisions in §63.1256(g)(11) for partially soluble and/or soluble HAP compounds. [§63.1257(e)(2)(iii)(E)]
- (a) Concentration in wastewater stream. The concentration of partially soluble and/or soluble HAP as provided in this paragraph. Concentration measurements to determine E shall be taken as provided in §63.1257(e)(2)(iii)(A)(5) for a series of treatment

processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per §63.1257(b)(10)(vi). The method shall be an analytical method for wastewater which has the compound of interest as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a one-hour period. Each one-hour period constitutes a run, and the performance test shall consist of a minimum of three runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific F_m factor listed in Table 8 of MACT GGG. Concentration measurements based on methods other than Method 305 shall not be adjusted by the compound-specific F_m factor listed in Table 8 of MACT GGG. [§63.1257(e)(2)(iii)(E)(1)]

- (b) Flow rate. Flow rate measurements to determine E shall be taken as provided in §63.1257(e)(2)(iii)(A)(5) for a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a single flow measurement device may be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements. [§63.1257(e)(2)(iii)(E)(2)]
- (c) Destruction efficiency. The permittee shall comply with the provisions in either §63.1257(e)(2)(iii)(E)(3)(i) or (ii). Compliance is demonstrated if the destruction efficiency, E, is equal to or greater than 95 percent. [§63.1257(e)(2)(iii)(E)(3)]
- (i) If the performance test is performed across the open or closed biological treatment system only, compliance is demonstrated if E is equal to F_{bio} , where E is the destruction efficiency of partially soluble and/or soluble HAP compounds and F_{bio} is the site-specific fraction of partially soluble and/or soluble HAP compounds biodegraded. F_{bio} shall be determined as specified in §63.1257(e)(2)(iii)(E)(4) and Appendix C of MACT G. [§63.1257(e)(2)(iii)(E)(3)(i)]
- (ii) If compliance is being demonstrated in accordance with §63.1257(e)(2)(iii)(A)(5)(i) or (ii), the removal efficiency shall be calculated using Equation 50 of MACT GGG. When complying with §63.1257(e)(2)(iii)(A)(5)(i), the series of nonbiological treatment processes comprise one treatment process segment. When complying with §63.1257(e)(2)(iii)(A)(5)(ii), each nonbiological treatment process is a treatment process segment. [§63.1257(e)(2)(iii)(E)(3)(ii)]
- (d) Site-specific fraction biodegraded (F_{bio}). The procedures used to determine the compound-specific kinetic parameters for use in calculating F_{bio} differ for the compounds listed in Tables 2 and 3 of MACT GGG. The permittee shall calculate F_{bio} as specified in either §63.1257(e)(2)(iii)(E)(4)(i) or (ii). [§63.1257(e)(2)(iii)(E)(4)]
- (i) For biological treatment processes that do not meet the definition for enhanced biological treatment in §63.1251, the permittee shall determine the F_{bio} for the compounds in Tables 2 and 3 of MACT GGG using any of the procedures in MACT Appendix C, except procedure 3 (inlet and outlet concentration measurements). (The symbol “ F_{bio} ” represents the site-specific fraction of an individual partially soluble or soluble HAP compound that is biodegraded.) [§63.1257(e)(2)(iii)(E)(4)(i)]

- (ii) If the biological treatment process meets the definition of “enhanced biological treatment process” in §63.1251, the permittee shall determine F_{bio} for the compounds in Table 2 of MACT GGG using any of the procedures specified in MACT Appendix C. The permittee shall calculate F_{bio} for the compounds in Table 3 of MACT GGG using the defaults for first order biodegradation rate constants (K1) in Table 9 of MACT GGG and follow the procedure explained in Form III of MACT Appendix C, or any of the procedures specified in MACT Appendix C. [§63.1257(e)(2)(iii)(E)(4)(ii)]
- (6) Open or closed aerobic biological treatment processes: percent removal for partially soluble or soluble HAP compounds. This paragraph applies to the use of performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the percent removal provisions for either partially soluble HAP compounds in §63.1256(g)(8)(ii) or soluble HAP compounds in §63.1256(g)(9)(ii) or (g)(12). The permittee shall comply with the provisions in §63.1257(e)(2)(iii)(E), except that compliance with §63.1256(g)(8)(ii) shall be demonstrated when E is equal to or greater than 99 percent, compliance with §63.1256(g)(9)(ii) shall be demonstrated when E is equal to or greater than 90 percent, and compliance with §63.1256(g)(12) shall be demonstrated when E is equal to or greater than 99 percent. [§63.1257(e)(2)(iii)(F)]
- (7) Closed biological treatment processes: percent mass removal option. This paragraph applies to the use of performance tests that are conducted for closed biological treatment processes to demonstrate compliance with the percent removal provisions in §§63.1256(g)(8)(ii), (g)(9)(ii), (g)(11), or (g)(12). The permittee shall comply with the requirements specified in §63.1257(e)(2)(iii)(G)(1) through (4). [§63.1257(e)(2)(iii)(G)]
- (a) Comply with the procedures specified in §63.1257(e)(2)(iii)(C)(1) through (3) to determine characteristics of the wastewater entering the biological treatment unit, except that the term “partially soluble and/or soluble HAP” shall mean “soluble HAP” for the purposes of §63.1257 if the permittee is complying with §63.1256(g)(9)(ii) or (g)(12), and it shall mean “partially soluble HAP” if the permittee is complying with §63.1256(g)(8)(ii). [§63.1257(e)(2)(iii)(G)(1)]
- (b) Comply with the procedures specified in §63.1257(e)(2)(iii)(D)(4) through (6) to determine the characteristics of gas vent streams exiting a control device, with the differences noted in §63.1257(e)(2)(iii)(G)(3)(i) and (ii). [§63.1257(e)(2)(iii)(G)(2)]
- (i) The term “partially soluble and/or soluble HAP” shall mean “soluble HAP” for the purposes of §63.1257 if the permittee is complying with §63.1256(g)(9)(ii) or (g)(12), and it shall mean “partially soluble HAP” if the permittee is complying with §63.1256(g)(8)(ii). [§63.1257(e)(2)(iii)(G)(2)(i)]
- (ii) The term “combustion treatment process” shall mean “control device” for the purposes of §63.1257. [§63.1257(e)(2)(iii)(G)(2)(ii)]
- (c) Percent removal/destruction calculation. The percent removal and destruction across the treatment unit and any control device(s) shall be calculated using Equation 51 of MACT GGG. [§63.1257(e)(2)(iii)(G)(3)]
- (d) Compare mass removal/destruction efficiency to required efficiency. Compare the mass removal/destruction efficiency (calculated using Equation 51 of MACT GGG) to the required efficiency as specified in §63.1256(g)(8)(ii), (g)(9)(ii), (g)(11), or (g)(12). If complying with §63.1256(g)(8)(ii), compliance is demonstrated if the mass removal/destruction is 99 percent or greater. If complying with §63.1256(g)(9)(ii), compliance is demonstrated if the mass removal/destruction efficiency is 90 percent

- or greater. If complying with §63.1256(g)(11), compliance is demonstrated if the mass removal/destruction efficiency is 95 percent or greater. If complying with §63.1256(g)(12), compliance is demonstrated if the mass removal/destruction efficiency is 99 percent or greater. [§63.1257(e)(2)(iii)(G)(4)]
- c) Compliance with control device provisions. Except as provided in §63.1257(e)(3)(iv), the permittee shall demonstrate that each control device or combination of control devices achieves the appropriate conditions specified in §63.1256(h)(2) by using one or more of the methods specified in §63.1257(e)(3)(i), (ii), or (iii). [§63.1257(e)(3)]
- i) Performance test for control devices other than flares. This paragraph applies to performance tests that are conducted to demonstrate compliance of a control device with the efficiency limits specified in §63.1256(h)(2). If complying with the 95-percent reduction efficiency requirement, comply with the requirements specified in §63.1257(e)(3)(i)(A) through (J). If complying with the 20 ppmv requirement, comply with the requirements specified in §63.1257(e)(3)(i)(A) through (G) and (e)(3)(i)(J). [§63.1257(e)(3)(i)]
- (1) General. The permittee shall comply with the general performance test provisions in §63.1257(e)(2)(iii)(A)(1) through (4), except that the term “treatment unit” shall mean “control device” for the purposes of §63.1257. [§63.1257(e)(3)(i)(A)]
- (2) Sampling sites. Sampling sites shall be selected using Method 1 or 1A of NSPS Appendix A, as appropriate. For determination of compliance with the 95 percent reduction requirement, sampling sites shall be located at the inlet and the outlet of the control device. For determination of compliance with the 20 ppmv limit, the sampling site shall be located at the outlet of the control device. [§63.1257(e)(3)(i)(B)]
- (3) Concentration in gas stream entering or exiting the control device. The concentration of total organic HAP or TOC in a gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples (i.e., integrated samples). Samples shall be taken at approximately equally spaced time intervals over a one-hour period. Each one-hour period constitutes a run, and the performance test shall consist of a minimum of three runs. Concentration measurements shall be determined using Method 18 of NSPS Appendix A. Alternatively, any other test method validated according to the procedures in Method 301 of MACT Appendix A may be used. [§63.1257(e)(3)(i)(C)]
- (4) Volumetric flow rate of gas stream entering or exiting the control device. The volumetric flow rate of the gas stream shall be determined using Method 2, 2A, 2C, or 2D of NSPS Appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements. [§63.1257(e)(3)(i)(D)]
- (5) Calculation of TOC concentration. The permittee shall compute TOC in accordance with the procedures in §63.1257(a)(2). [§63.1257(e)(3)(i)(E)]
- (6) Calculation of total organic HAP concentration. If determining compliance based on total organic HAP concentration, the permittee shall compute the total organic HAP concentration in accordance with the provisions in §63.1257(a)(2). [§63.1257(e)(3)(i)(F)]
- (7) Requirements for combustion control devices. If the control device is a combustion device, the permittee shall correct TOC and organic HAP concentrations to three percent oxygen in accordance with the provisions in §63.1257(a)(3), and demonstrate initial compliance with the requirements for halogenated streams in accordance with §63.1257(a)(6). [§63.1257(e)(3)(i)(G)]
- (8) Mass rate calculation. The mass rate of either TOC (minus methane and ethane) or total organic HAP for each sample run shall be calculated using the following equations. Where the mass rate of TOC is being calculated, all organic compounds (minus methane

- and ethane) measured by methods specified in §63.1257(e)(3)(i)(C) are summed using Equations 52 and 53 of MACT GGG. Where the mass rate of total organic HAP is being calculated, only soluble and partially soluble HAP compounds shall be summed using Equations 52 and 53. [§63.1257(e)(3)(i)(H)]
- (9) Percent reduction calculation. The percent reduction in TOC or total organic HAP for each sample run shall be calculated using Equation 54 of MACT GGG. [§63.1257(e)(3)(i)(I)]
- (10) Compare mass destruction efficiency to required efficiency. If complying with the 95-percent reduction efficiency requirement, compliance is demonstrated if the mass destruction efficiency (calculated in Equation 51 of MACT GGG) is 95 percent or greater. If complying with the 20 ppmv limit, compliance is demonstrated if the outlet TOC concentration is 20 ppmv, or less. [§63.1257(e)(3)(i)(J)]
- ii) Design evaluation. A design evaluation conducted in accordance with the provisions in §63.1257(a)(1). Compounds that meet the requirements specified in §63.1257(e)(2)(iii)(A)(4) are not required to be included in the design evaluation. [§63.1257(e)(3)(ii)]
- iii) Exemptions from compliance demonstrations. If using any control device specified in §63.157(a)(4), the permittee is exempt from the requirements in §63.1257(e)(3)(i) through (e)(3)(iii) and from the requirements in §63.6(f). [§63.1257(e)(3)(iv)]
6. Pollution prevention alternative standard. The permittee shall demonstrate compliance with §63.1252(e)(2) using the procedures described in §63.1257(f)(1) and (f)(3). The permittee shall demonstrate compliance with §63.1252(e)(3) using the procedures described in §63.1257(f)(2) and (f)(3). [§63.1257(f)]
- a) Compliance is demonstrated when the annual kg/kg factor, calculated according to the procedure in §63.1257(f)(1)(i) and (iii), is reduced by at least 75 percent as calculated according to the procedure in §63.1257(f)(1)(i) and (ii). [§63.1257(f)(1)]
- i) The production-indexed HAP consumption factors shall be calculated by dividing annual consumption of total HAP by the annual production rate, per process. The production-indexed total VOC consumption factor shall be calculated by dividing annual consumption of total VOC by the annual production rate, per process. [§63.1257(f)(1)(i)]
- ii) The baseline factor is calculated from yearly production and consumption data for the first three-year period in which the PMPU was operational, beginning no earlier than the 1987 calendar year, or for a minimum period of 12 months from startup of the process until the present in which the PMPU was operational and data are available, beginning no earlier than the 1987 calendar year. [§63.1257(f)(1)(ii)]
- iii) The annual factor is calculated on the following bases: [§63.1257(f)(1)(iii)]
- (1) For continuous processes, the annual factor shall be calculated every 30 days for the 12-month period preceding the 30th day (30-day rolling average). [§63.1257(f)(1)(iii)(A)]
- (2) For batch processes, the annual factor shall be calculated either every 10 batches for the 12-month period preceding the 10th batch (10-batch rolling average) or a maximum of once per month, if the number of batches is greater than 10 batches per month. The annual factor shall be calculated every five batches if the number of batches is less than 10 for the 12-month period preceding the 10th batch and shall be calculated every year if the number of batches is less than five for the 12-month period preceding the fifth batch. [§63.1257(f)(1)(iii)(B)]
- b) Compliance is demonstrated when the requirements of §63.1257(f)(2)(i) through (iv) are met. [§63.1257(f)(2)]

- i) The annual kg/kg factor, calculated according to the procedure in §63.1257(f)(1)(i) and (f)(1)(iii), is reduced to a value equal to or less than 50 percent of the baseline factor calculated according to the procedure in §63.1257(f)(1)(i) and (ii). [§63.1257(f)(2)(i)]
 - ii) The yearly reductions associated with add-on controls that meet the criteria of §§63.1252(h)(3)(ii)(A) through (D) shall be equal to or greater than the amounts calculated in §63.1257(f)(2)(ii)(A) and (B): [§63.1257(f)(2)(ii)]
 - (1) The mass of HAP calculated using Equation 55 of MACT GGG. [§63.1257(f)(2)(ii)(A)]
 - (2) The mass of VOC calculated using Equation 56 of MACT GGG. [§63.1257(f)(2)(ii)(B)]
 - iii) Demonstration that the criteria in §63.1252(e)(3)(ii)(A) through (D) are met shall be accomplished through a description of the control device and of the material streams entering and exiting the control device. [§63.1257(f)(2)(iii)]
 - iv) The annual reduction achieved by the add-on control shall be quantified using the methods described in §63.1257(d). [§63.1257(f)(2)(iv)]
 - c) If complying with the P2 standard, the permittee shall prepare a P2 demonstration summary that shall contain, at a minimum, the following information: [§63.1257(f)(3)]
 - i) Descriptions of the methodologies and forms used to measure and record daily consumption of HAP compounds reduced as part of the P2 standard. [§63.1257(f)(3)(i)]
 - ii) Descriptions of the methodologies and forms used to measure and record daily production of products which are included in the P2 standard. [§63.1257(f)(3)(ii)]
 - iii) Supporting documentation for the descriptions provided in §63.1257(f)(3)(i) and (ii) including, but not limited to, operator log sheets and copies of daily, monthly, and annual inventories of materials and products. [§63.1257(f)(3)(iii)]
7. Compliance with storage tank provisions by using emissions averaging. For two or more affected storage tanks, the permittee may demonstrate compliance with §63.1253, as applicable, by fulfilling the requirements of §63.1257(g)(1) through (4). [§63.1257(g)]
 - a) The permittee shall develop and submit for approval an Implementation Plan containing all the information required in §63.1259(e) six months prior to the compliance date of the standard. The Director shall have 90 days to approve or disapprove the emissions averaging plan after which time the plan shall be considered approved. [§63.1257(g)(1)]
 - b) The annual mass rate of total organic HAP (E^{Ti} , E^{To}) shall be calculated for each storage tank included in the emissions average using the procedures specified in §63.1257(c)(1), (2), or (3). [§63.1257(g)(2)]
 - c) Equations 57 and 58 of MACT GGG shall be used to calculate total HAP emissions for those tanks subject to §63.1253(b) or (c). [§63.1257(g)(3)]
 - d) The overall percent reduction efficiency shall be calculated using Equation 59 of MACT GGG. [§63.1257(g)(4)]
8. Compliance with process vent provisions by using emissions averaging. For two or more affected processes complying with §63.1254 by using emissions averaging, the permittee shall demonstrate compliance with §63.1257(h)(1), (2) and (3). [§63.1257(h)]
 - a) The permittee shall develop and submit for approval an Implementation Plan at least six months prior to the compliance date of the standard containing all the information required in §63.1259(e). The Director shall have 90 days to approve or disapprove the emissions averaging plan. The plan shall be considered approved if the Director either approves the plan in writing, or fails to disapprove the plan in writing. The 90-day period shall begin when the Director receives the request. If the request is denied, the permittee shall still be in compliance with the standard by the compliance date. [§63.1257(h)(1)]

- b) The permittee shall calculate uncontrolled and controlled emissions of HAP by using the methods specified in §63.1257(d)(2) and (3) for each process included in the emissions average. [§63.1257(h)(2)]
- c) Equations 60 and 61 of MACT GGG shall be used to calculate total HAP emissions. [§63.1257(h)(3)]
- d) The overall percent reduction efficiency shall be calculated using Equation 62 of MACT GGG. [§63.1257(h)(4)]

Table 8 to MACT GGG – Fraction Measured (F_m) for HAP Compounds in Wastewater Streams

Chemical name	CAS No. ⁷	F_m
Acetaldehyde	75070	1.00
Acetonitrile	75058	0.99
Acetophenone	98862	0.31
Acrolein	107028	1.00
Acrylonitrile	107131	1.00
Allyl chloride	107051	1.00
Benzene	71432	1.00
Benzyl chloride	100447	1.00
Biphenyl	92524	0.86
Bromoform	75252	1.00
Butadiene (1,3-)	106990	1.00
Carbon disulfide	75150	1.00
Carbon tetrachloride	56235	1.00
Chlorobenzene	108907	0.96
Chloroform	67663	1.00
Chloroprene (2-Chloro-1,3-butadiene)	126998	1.00
Cumene	98828	1.00
Dichlorobenzene (p-1,4-)	106467	1.00
Dichloroethane (1,2-) (Ethylene dichloride)	107062	1.00
Dichloroethylether (Bis(2-Chloroethyl ether))	111444	0.76
Dichloropropene (1,3-)	542756	1.00
Diethyl sulfate	64675	0.0025
Dimethyl sulfate	77781	0.086
Dimethylaniline (N,N-)	121697	0.00080
Dimethylhydrazine (1,1-)	57147	0.38
Dinitrophenol (2,4-)	51285	0.0077
Dinitrotoluene (2,4-)	121142	0.085
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911	0.87
Epichlorohydrin(1-Chloro-2,3-epoxypropane)	106898	0.94
Ethyl acrylate	140885	1.00
Ethylbenzene	100414	1.00
Ethyl chloride (Chloroethane)	75003	1.00
Ethylene dibromide (Dibromomethane)	106934	1.00
Ethylene glycol dimethyl ether	110714	0.86
Ethylene glycol monobutyl ether acetate	112072	0.043

⁷ CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds

Chemical name	CAS No. ⁷	F _m
Ethylene glycol monomethyl ether acetate	110496	0.093
Ethylene oxide	75218	1.00
Ethylidene dichloride (1,1-Dichloroethane)	75343	1.00
Hexachlorobenzene	118741	0.97
Hexachlorobutadiene	87683	0.88
Hexachloroethane	67721	0.50
Hexane	110543	1.00
Isophorone	78591	0.47
Methanol	67561	0.85
Methyl bromide (Bromomethane)	74839	1.00
Methyl chloride (Chloromethane)	74873	1.00
Methyl ethyl ketone (2-Butanone)	78933	0.99
Methyl isobutyl ketone (Hexone)	108101	0.98
Methyl methacrylate	80626	1.00
Methyl tert-butyl ether	1634044	1.00
Methylene chloride (Dichloromethane)	75092	1.00
Naphthalene	91203	0.99
Nitrobenzene	98953	0.39
Nitropropane (2-)	79469	0.99
Phosgene	75445	1.00
Propionaldehyde	123386	1.00
Propylene dichloride (1,2-Dichloropropane)	78875	1.00
Propylene oxide	75569	1.00
Styrene	100425	1.00
Tetrachloroethane (1,1,2,2-)	79345	1.00
Tetrachloroethylene (Perchloroethylene)	127184	1.00
Toluene	108883	1.00
Toluidine (o-)	95534	0.15
Trichlorobenzene (1,2,4-)	120821	1.00
Trichloroethane (1,1,1-) (Methyl chloroform)	71556	1.00
Trichloroethane (1,1,2-) (Vinyl Trichloride)	79005	0.98
Trichloroethylene	79016	1.00
Trichlorophenol (2,4,5-)	95954	1.00
Triethylamine	121448	1.00
Trimethylpentane (2,2,4-)	540841	1.00
Vinyl acetate	108054	1.00
Vinyl chloride (Chloroethylene)	75014	1.00
Vinylidene chloride (1,1-Dichloroethylene)	75354	1.00
Xylene (m-)	108383	1.00
Xylene (o-)	95476	1.00
Xylene (p-)	106423	1.00

Table 9 to MACT GGG – Default Biorates for Soluble HAP

Compound name	Biorate (K1), L/g MLVSS-hr
Acetonitrile	0.100
Acetophenone	0.538
Diethyl sulfate	0.105
Dimethyl hydrazine(1,1)	0.227
Dimethyl sulfate	0.178
Dinitrotoluene(2,4)	0.784
Dioxane(1,4)	0.393
Ethylene glycol dimethyl ether	0.364
Ethylene glycol monobutyl ether acetate	0.496
Ethylene glycol monomethyl ether acetate	0.159
Isophorone	0.598
Methanol	⁸
Nitrobenzene	2.300
Toluidine (-0)	0.859
Triethylamine	1.064

Monitoring:

1. The permittee shall provide evidence of continued compliance with the standard as specified in §63.1258. During the initial compliance demonstration, maximum or minimum operating parameter levels, as appropriate, shall be established for emission sources that will indicate the source is in compliance. Test data, calculations, or information from the evaluation of the control device design shall be used to establish the operating parameter level. [§63.1258(a)]
2. Monitoring for control devices— [§63.1258(b)]
 - a) Parameters to monitor. Except as specified in §63.1257(b)(1)(i), for each control device, the permittee shall install and operate monitoring devices and operate within the established parameter levels to ensure continued compliance with the standard. Monitoring parameters are specified for control scenarios in Table 4 of MACT GGG and in §63.1258(b)(1)(ii) through (xi). [§63.1258(b)(1)]
 - i) Periodic verification. For control devices that control vent streams totaling less than 1 tpy HAP emissions, before control, monitoring shall consist of a daily verification that the device is operating properly. If the control device is used to control batch process vents alone or in combination with other streams, the verification may be on a per batch basis. This verification shall include, but not be limited to, a daily or per batch demonstration that the unit is working as designed and may include the daily measurements of the parameters described in §63.1258(b)(1)(ii) through (x). This demonstration shall be included in the Precompliance report, to be submitted six months prior to the compliance date of the standard. [§63.1258(b)(1)(i)]
 - ii) Scrubbers. For affected sources using liquid scrubbers, the permittee shall establish a minimum scrubber liquid flow rate⁹ which shall be measured and recorded every 15 minutes

⁸ For direct dischargers, the default biorate for methanol is 3.5 L/g MLVSS-hr; for indirect dischargers, the default biorate for methanol is 0.2 L/g MLVSS-hr.

⁹ The minimum scrubber liquid flow rates are: 2.85 gpm for S-201 Scrubber, 13.6 gpm for Y-601 Scrubber, 2.85 gpm for Y-606 Scrubber, and 6 gpm for Y-801 Tank Farm Scrubber.

during the period in which the scrubber is functioning in achieving the HAP removal required by MACT GGG. If the scrubber uses a caustic solution to remove acid emissions, the permittee shall establish a minimum pH of the effluent scrubber liquid as a site-specific operating parameter which shall be monitored at least once a day. As an alternative to measuring pH, the permittee may elect to continuously monitor the caustic strength of the scrubber effluent. The minimum scrubber flowrate shall be based on the conditions anticipated under worst-case conditions, as defined in §63.1258(b)(8)(i). [§63.1258(b)(1)(ii)]

(1) The monitoring device used for measurement of scrubber liquid flowrate shall be certified by the manufacturer to be accurate within ± 10 percent of the design scrubber liquid flowrate. [§63.1258(b)(1)(ii)(B)]

(2) The monitoring device shall be calibrated annually. [§63.1258(b)(1)(ii)(C)]

iii) Condensers. For each condenser, the permittee shall establish the maximum condenser outlet gas temperature or product side temperature as a site specific operating parameter which shall be measured and recorded at least every 15 minutes during the period in which the condenser is functioning in achieving the HAP removal required by MACT GGG.

[§63.1258(b)(1)(iii)]

(1) The temperature monitoring device shall be accurate to within ± 2 percent of the temperature measured in degrees Celsius or ± 2.5 °C, whichever is greater.

[§63.1258(b)(1)(iii)(A)]

(2) The temperature monitoring device shall be calibrated annually. [§63.1258(b)(1)(iii)(B)]

iv) Regenerative carbon adsorbers. For each regenerative carbon adsorber, the permittee shall comply with the provisions in §63.1258(b)(1)(iv)(A) through (F). [§63.1258(b)(1)(iv)]

(1) Establish the regeneration cycle characteristics specified in §63.1258(b)(1)(iv)(A)(1) through (4) of this section under worst-case conditions, as defined in §63.1257(b)(8)(i).

[§63.1258(b)(1)(iv)(A)]

(a) Minimum regeneration frequency (i.e., operating time since last regeneration)¹⁰;

[§63.1258(b)(1)(iv)(A)(1)]

(b) Minimum temperature to which the bed is heated during regeneration¹¹;

[§63.1258(b)(1)(iv)(A)(2)]

(c) Maximum temperature to which the bed is cooled, measured within 15 minutes of completing the cooling phase¹²; and [§63.1258(b)(1)(iv)(A)(3)]

(d) Minimum regeneration stream flow¹³. [§63.1258(b)(1)(iv)(A)(4)]

(2) Monitor and record the regeneration cycle characteristics specified in §63.1258(b)(1)(iv)(B)(1) through (4) for each regeneration cycle. [§63.1258(b)(1)(iv)(B)]

(a) Regeneration frequency (operating time since end of last regeneration);

[§63.1258(b)(1)(iv)(B)(1)]

(b) Temperature to which the bed is heated during regeneration;

[§63.1258(b)(1)(iv)(B)(2)]

(c) Temperature to which the bed is cooled, measured within 15 minutes of the completion of the cooling phase; and [§63.1258(b)(1)(iv)(B)(3)]

¹⁰ The minimum regeneration frequency is every 12 hours or upon breakthrough. Where breakthrough occurs when the batch-average difference between the THC Inlet Analyzer and THC Outlet Analyzer is less than 95%.

¹¹ The minimum temperature of the bed during regeneration is 200°F.

¹² The maximum temperature to which the bed is cooled, measured 15 minutes after completing the cooling phase is 110°F.

¹³ The minimum regeneration stream flow is 350 pounds per regeneration cycle.

- (d) Regeneration stream flow. [§63.1258(b)(1)(iv)(B)(4)]
- (3) Use a temperature monitoring device that is accurate to within \pm two percent of the temperature measured in degrees Celsius or \pm 2.5 °C, whichever is greater. [§63.1258(b)(1)(iv)(C)]
- (4) Use a regeneration stream flow monitoring device capable of recording the total regeneration stream flow to within \pm 10 percent of the established value (i.e., accurate to within \pm 10 percent of the reading). [§63.1258(b)(1)(iv)(D)]
- (5) Calibrate the temperature and flow monitoring devices annually. [§63.1258(b)(1)(iv)(E)]
- (6) Conduct an annual check for bed poisoning in accordance with manufacturer's specifications. [§63.1258(b)(1)(iv)(F)]
- v) Nonregenerative carbon adsorbers. For each nonregenerative carbon adsorber, the permittee shall establish and monitor the maximum time interval between replacement based on the conditions anticipated under worst-case, as defined in §63.1257(b)(8)(i).¹⁴
- vi) Thermal incinerators. For each thermal incinerator, the permittee shall establish the minimum temperature of the gases exiting the combustion chamber¹⁵ as the site-specific operating parameter which shall be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the HAP removal required by this subpart. [§63.1258(b)(1)(vii)]
- (1) The temperature monitoring device shall be accurate to within \pm 0.75 percent of the temperature measured in degrees Celsius or \pm 2.5 °C, whichever is greater. [§63.1258(b)(1)(vii)(A)]
- (2) The monitoring device shall be calibrated annually. [§63.1258(b)(1)(vii)(B)]
- vii) Continuous emission monitor. As an alternative to the parameters specified in §63.1258(b)(1)(ii) through (ix), the permittee may monitor and record the outlet HAP concentration or both the outlet TOC concentration and outlet hydrogen halide and halogen concentration every 15 minutes during the period in which the control device is functioning in achieving the HAP removal required by MACT GGG. The permittee need not monitor the hydrogen halide and halogen concentration if, based on process knowledge, the permittee determines that the emission stream does not contain hydrogen halides or halogens. The HAP or TOC monitor shall meet the requirements of Performance Specification 8 or 9 of NSPS Appendix B and shall be installed, calibrated, and maintained, according to §63.8. As part of the QA/QC Plan, calibration of the device shall include, at a minimum, quarterly cylinder gas audits. [§63.1258(b)(1)(x)]
- viii) CVS visual inspections. The permittee shall perform monthly visual inspections of each closed vent system as specified in §63.1252(b). [§63.1258(b)(1)(xi)]
- b) Averaging periods. Averaging periods for parametric monitoring levels shall be established according to §63.1258(b)(2)(i) through (iii). [§63.1258(b)(2)]
- i) Except as provided in §63.1258(b)(2)(iii), a daily (24-hour) or block average shall be calculated as the average of all values for a monitored parameter level set according to the procedures in §63.1258(b)(3)(iii) recorded during the operating day or block. [§63.1258(b)(2)(i)]

¹⁴ The carbon canisters used to control emissions from the Cefdinir PMPU are replaced every 50 batches. The carbon canisters used to control emissions from the Cefprozil/Cefadroxil PMPU are replaced every 9 batches.

¹⁵ The minimum temperature of the gas exiting the combustion chamber is 1550°F at the time of permit issuance. The minimum temperature of the gas exiting the combustion chamber shall be revised to the average observed temperature during subsequent RTO testing required within 180 days of permit issuance.

- ii) The operating day or block shall be defined in the Notification of Compliance Status report. The daily average may be from midnight to midnight or another continuous 24-hour period. The block average is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a batch process. [§63.1258(b)(2)(ii)]
- iii) Monitoring values taken during periods in which the control devices are not functioning in controlling emissions, as indicated by periods of no flow, shall not be considered in the averages. Where flow to the device could be intermittent, the permittee shall install, calibrate and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. [§63.1258(b)(2)(iii)]
- c) Procedures for setting parameter levels for control devices used to control emissions— [§63.1258(b)(3)]
 - i) Small control devices. Except as provided in §63.1258(b)(1)(i), for devices controlling less than 10 tpy of HAP for which a performance test is not required, the parametric levels shall be set based on the design evaluation required in §63.1257(d)(3)(i). If a performance test is conducted, the monitoring parameter level shall be established according to the procedures in §63.1258(b)(3)(ii). [§63.1258(b)(3)(i)]
 - ii) Large control devices. For devices controlling greater than 10 tpy of HAP for which a performance test is required, the parameter level shall be established as follows: [§63.1258(b)(3)(ii)]
 - (1) If the operating parameter level to be established is a maximum, it shall be based on the average of the values from each of the three test runs. [§63.1258(b)(3)(ii)(A)]
 - (2) If the operating parameter level to be established is a minimum, it shall be based on the average of the values from each of the three test runs. [§63.1258(b)(3)(ii)(B)]
 - (3) The permittee may establish the parametric monitoring level(s) based on the performance test supplemented by engineering assessments and manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values. The rationale for the specific level for each parameter, including any data and calculations used to develop the level(s) and a description of why the level indicates proper operation of the control device shall be provided in the Precompliance report. The procedures specified in this section have not been approved by the Director and determination of the parametric monitoring level using these procedures is subject to review and approval by the Director. [§63.1258(b)(3)(ii)(C)]
 - iii) Parameters for control devices controlling batch process vents. For devices controlling batch process vents alone or in combination with other streams, the parameter level(s) shall be established in accordance with §63.1258(b)(3)(iii)(A) or (B). [§63.1258(b)(3)(iii)]
 - (1) If more than one batch emission episode has been selected to be controlled, a single level for the batch process(es) shall be determined from the initial compliance demonstration. [§63.1258(b)(3)(iii)(A)]
 - (2) Instead of establishing a single level for the batch process(es), as described in §63.1258(b)(3)(iii)(A), the permittee may establish separate levels for each batch emission episode, selected to be controlled. If separate monitoring levels are established, the permittee shall provide a record indicating at what point in the daily schedule or log of processes required to be recorded per the requirements of §63.1259(b)(9) the parameter being monitored changes levels and must record at least one reading of the new parameter level, even if the duration of monitoring for the new parameter is less than 15-minutes. [§63.1258(b)(3)(iii)(B)]

- d) Request approval to monitor alternative parameters. The permittee may request approval to monitor parameters other than those required by §63.1258(b)(1)(ii) through (ix). The request shall be submitted according to the procedures specified in §63.8(f) or included in the Precompliance report. [§63.1258(b)(4)]
- e) Monitoring for the alternative standards. [§63.1258(b)(5)]
- i) For control devices that are used to comply with the provisions of §63.1253(d) or §63.1254(c), the permittee shall monitor and record the outlet TOC concentration and the outlet hydrogen halide and halogen concentration every 15 minutes during the period in which the device is functioning in achieving the HAP removal required by MACT GGG using CEMS as specified in §63.1258(b)(5)(i)(A) through (D). [§63.1258(b)(5)(i)]
- (1) A TOC monitor meeting the requirements of EPA Performance Specification 8, 9, or 15 of NSPS Appendix B shall be installed, calibrated, and maintained according to §63.8. [§63.1258(b)(5)(i)(A)]
- (2) Except as specified in §63.1258(b)(5)(i)(C) and (D), the permittee shall monitor HCl using either a FTIR CEMS that meets Performance Specification 15 of NSPS Appendix B or any other CEMS capable of measuring HCl for which a performance specification has been promulgated in NSPS Appendix B. To monitor HCl with a CEMS for which a performance specification has not been promulgated, the permittee shall prepare a monitoring plan and submit it for approval in accordance with the procedures specified in §63.8. [§63.1258(b)(5)(i)(B)]
- (3) As an alternative to using a CEMS as specified in §63.1258(b)(5)(i)(B) to monitor halogenated vent streams that are controlled by a combustion device followed by a scrubber, the permittee may elect to monitor scrubber operating parameters as specified in §63.1258(b)(1)(ii) that demonstrate the HCl emissions are reduced by at least 95 percent by weight. [§63.1258(b)(5)(i)(C)]
- (4) The permittee need not monitor the hydrogen halide and halogen concentration if, based on process knowledge, the permittee determines that the emission stream does not contain hydrogen halides or halogens. [§63.1258(b)(5)(i)(D)]
- ii) If complying with the alternative standard using control devices in which supplemental gases are added to the vents or manifolds, the permittee shall either correct for supplemental gases as specified in §63.1257(a)(3) or comply with the requirements of §63.1258(b)(5)(ii)(A) or (B). If the permittee corrects for supplemental gases as specified in §63.1257(a)(3)(ii) for noncombustion control devices, the flow rates shall be evaluated as specified in §63.1258(b)(5)(ii)(C). [§63.1258(b)(5)(ii)]
- (1) Provisions for combustion devices. As an alternative to correcting for supplemental gases as specified in §63.1257(a)(3), the permittee may monitor residence time and firebox temperature according to the requirements of §63.1258(b)(5)(ii)(A)(1) and (2). Monitoring of residence time may be accomplished by monitoring flowrate into the combustion chamber. [§63.1258(b)(5)(ii)(A)]
- (a) If complying with the alternative standard instead of achieving a control efficiency of 95 percent or less, the permittee shall maintain a minimum residence time of 0.5 seconds and a minimum combustion chamber temperature of 760°C. [§63.1258(b)(5)(ii)(A)(1)]
- (b) If complying with the alternative standard instead of achieving a control efficiency of 98 percent, the permittee shall maintain a minimum residence time of 0.75 seconds and a minimum combustion chamber temperature of 816°C. [§63.1258(b)(5)(ii)(A)(2)]

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- (2) Provisions for dense gas systems. As an alternative to correcting for supplemental gases as specified in §63.1257(a)(3), for noncombustion devices used to control emissions from dense gas systems, as defined in §63.1251, the permittee shall monitor flowrate as specified in §63.1258(b)(5)(ii)(B)(1) through (4). [§63.1258(b)(5)(ii)(B)]
- (a) Use Equation 63 of MACT GGG to calculate the system flowrate setpoint at which the average concentration is 5,000 ppmv TOC. [§63.1258(b)(5)(ii)(B)(1)]
 - (b) Annual emissions used in Equation 63 of MACT GGG shall be based on the actual mass of organic compounds entering the control device, as calculated from the most representative emissions inventory data submitted within the five years before the Notification of Compliance Status report is due. The permittee shall recalculate the system flowrate setpoint once every five years using the annual emissions from the most representative emissions inventory data submitted during the five-year period after the previous calculation. Results of the initial calculation shall be included in the Notification of Compliance Status report, and recalculated values shall be included in the next Periodic report after each recalculation. For all calculations after the initial calculation, to use emissions inventory data calculated using procedures other than those specified in §63.1257(d), the permittee shall submit the emissions inventory data calculations and rationale for their use in the Notification of Process Change report or an application for a Part 70 permit renewal or revision. [§63.1258(b)(5)(ii)(B)(2)]
 - (c) In the Notification of Compliance Status report, the permittee may elect to establish both a maximum daily average operating flowrate limit above the flowrate setpoint and a reduced outlet concentration limit corresponding to this flowrate limit. The permittee may also establish reduced outlet concentration limits for any daily average flowrates between the flowrate setpoint and the flowrate limit. The correlation between these elevated flowrates and the corresponding outlet concentration limits shall be established using Equation 64 of MACT GGG. [§63.1258(b)(5)(ii)(B)(3)]
 - (d) The permittee shall install and operate a monitoring system for measuring system flowrate. The flowrate into the control device shall be monitored and recorded at least once every hour. The system flowrate shall be calculated as the average of all values measured during each 24-hour operating day. The flowrate monitoring device shall be accurate to within five percent of the system flowrate setpoint, and the flowrate monitoring device shall be calibrated annually. [§63.1258(b)(5)(ii)(B)(4)]
- (3) Flow rate evaluation for noncombustion devices. To demonstrate continuous compliance with the requirement to correct for supplemental gases as specified in §63.1257(a)(3)(ii) for noncombustion devices, the permittee shall evaluate the volumetric flow rate of supplemental gases, V_s , and the volumetric flow rate of all gases, V_a , each time a new operating scenario is implemented based on process knowledge and representative operating data. The procedures used to evaluate the flow rates, and the resulting correction factor used in Equation 7B of MACT GGG, shall be included in the Notification of Compliance Status report and in the next Periodic report submitted after an operating scenario change. [§63.1258(b)(5)(ii)(C)]
- f) Exceedances of operating parameters. An exceedance of an operating parameter is defined as one of the following: [§63.1258(b)(6)]
- i) If the parameter, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration. [§63.1258(b)(6)(i)]

- ii) If the parameter, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration. [§63.1258(b)(6)(ii)]
- g) Excursions. Excursions are defined by either of the two cases listed in §63.1258(b)(7)(i) or (ii). [§63.1258(b)(7)]
 - i) When the period of control device operation is four hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data, as defined in §63.1258(b)(7)(iii), for at least 75 percent of the operating hours. [§63.1258(b)(7)(i)]
 - ii) When the period of control device operation is less than four hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data. [§63.1258(b)(7)(ii)]
 - iii) Monitoring data are insufficient to constitute a valid hour of data, as used in §63.1258(b)(7)(i) and (ii), if measured values are unavailable for any of the required 15-minute periods within the hour. [§63.1258(b)(7)(iii)]
- h) Violations. Exceedances of parameters monitored according to the provisions of §63.1258(b)(1)(ii), (iv) through (ix), and (b)(5)(ii)(A) and (B), or excursions as defined by §63.1258(b)(7)(i) through (iii), constitute violations of the operating limit according to §63.1258(b)(8)(i), (ii), and (iv). Exceedances of the temperature limit monitored according to the provisions of §63.1258(b)(1)(iii) or exceedances of the outlet concentrations monitored according to the provisions of §63.1258(b)(1)(x) constitute violations of the emission limit according to §63.1258(b)(8)(i), (ii), and (iv). Exceedances of the outlet concentrations monitored according to the provisions of §63.1258(b)(5) constitute violations of the emission limit according to the provisions of §63.1258(b)(8)(iii) and (iv). [§63.1258(b)(8)]
 - i) Except as provided in §63.1258(b)(8)(iv), for episodes occurring more than once per day, exceedances of established parameter limits or excursions will result in no more than one violation per operating day for each monitored item of equipment utilized in the process. [§63.1258(b)(8)(i)]
 - ii) Except as provided in §63.1258(b)(8)(iv), for control devices used for more than one process in the course of an operating day, exceedances or excursions will result in no more than one violation per operating day, per control device, for each process for which the control device is in service. [§63.1258(b)(8)(ii)]
 - iii) Except as provided in §63.1258(b)(8)(iv), exceedances of the 20 or 50 ppmv TOC outlet emission limit, averaged over the operating day, will result in no more than one violation per day per control device. Except as provided in §63.1258(b)(8)(iv), exceedances of the 20 or 50 ppmv hydrogen halide or halogen outlet emission limit, averaged over the operating day, will result in no more than one violation per day per control device. [§63.1258(b)(8)(iii)]
- 3. Monitoring for emission limits. If complying with the provisions of §63.1254(a)(2), the permittee shall demonstrate continuous compliance with the 900 and 1,800 kg/yr emission limits by calculating daily 365-day rolling summations of emissions. During periods of planned routine maintenance when emissions are controlled as specified in §63.1252(h), the permittee shall calculate controlled emissions assuming the HAP emissions are reduced by 93 percent. If opting to switch compliance strategy from the 93 percent control requirement to the annual mass emission limit method, as described in §63.1254(a)(1)(i), the rolling summations, beginning with the first day after the switch, shall include emissions from the past 365 days. [§63.1258(c)]
- 4. Monitoring for equipment leaks. If complying with the requirements of §63.1255, the permittee shall meet the monitoring requirements described §63.1255. [§63.1258(d)]
- 5. Pollution prevention. If the permittee chooses to comply with the requirements of §§63.1252(e)(2) and (3), the permittee shall calculate a yearly rolling average of kg HAP consumption per kg

production and kg VOC consumption per kg production every month or every 10 batches. Each rolling average kg/kg factor that exceeds the value established in §63.1257(f)(1)(ii) will be considered a violation of the emission limit. [§63.1258(e)]

6. Emissions averaging. If the permittee chooses to comply with the requirements of §63.1252(d), the permittee shall meet all monitoring requirements specified in §63.1258(b)(1) and (3), as applicable, for all processes and storage tanks included in the emissions average. [§63.1258(f)]
7. Inspection and monitoring of waste management units and treatment processes. [§63.1258(g)]
 - a) For each wastewater tank, surface impoundment, container, individual drain system, and oil-water separator that receives, manages, or treats wastewater, a residual removed from wastewater, a recycled wastewater, or a recycled residual removed from wastewater, the permittee shall comply with the inspection requirements specified in Table 7 of MACT GGG. [§63.1258(g)(1)]
 - b) For each biological treatment unit used to comply with §63.1256(g), the permittee shall monitor TSS, BOD, and the biomass concentration at a frequency approved by the permitting authority and using methods approved by the permitting authority. The permittee may request approval to monitor other parameters. The request shall be submitted in the Precompliance report according to the procedures specified in §63.1260(e), and shall include a description of planned reporting and recordkeeping procedures. The permittee shall include as part of the submittal the basis for the selected monitoring frequencies and the methods that will be used. The Director will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means. [§63.1258(g)(2)]
 - c) For nonbiological treatment units, the permittee shall request approval to monitor appropriate parameters that demonstrate proper operation of the selected treatment process. The request shall be submitted in the Precompliance report according to the procedures specified in §63.1260(e), and shall include a description of planned reporting and recordkeeping procedures. The Director will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means. [§63.1258(g)(3)]
8. Leak inspection provisions for vapor suppression equipment. [§63.1258(h)]
 - a) Except as provided in §63.1258(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with §63.1258, the permittee shall comply with the requirements of §63.1258(h)(2) through (8). [§63.1258(h)(1)]
 - b) Except as provided in §63.1258(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1258(h)(2)(i) and (ii) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1258(h)(2)(iii). [§63.1258(h)(2)]
 - i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1258(h)(2)(i)]
 - (1) Conduct an initial inspection according to the procedures in §63.1258(h)(3), and [§63.1258(h)(2)(i)(A)]
 - (2) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1258(h)(2)(i)(B)]
 - ii) If the vapor collection system or closed-vent system is constructed of ductwork, the permittee shall: [§63.1258(h)(2)(ii)]
 - (1) Conduct an initial inspection according to the procedures in §63.1258(h)(3), and [§63.1258(h)(2)(ii)(A)]
 - (2) Conduct annual inspections according to the procedures in §63.1258(h)(3). [§63.1258(h)(2)(ii)(B)]

- (3) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1258(h)(2)(ii)(C)]
- iii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1258(h)(2)(iii)]
 - (1) Conduct an initial inspection according to the procedures in §63.1258(h)(3), and [§63.1258(h)(2)(iii)(A)]
 - (2) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1258(h)(2)(iii)(B)]
- c) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1258(h)(3)(i) through (v). [§63.1258(h)(3)]
 - i) Inspections shall be conducted in accordance with Method 21 of NSPS Appendix A. [§63.1258(h)(3)(i)]
 - ii) Detection instrument performance criteria. [§63.1258(h)(3)(ii)]
 - (1) Except as provided in §63.1258(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of NSPS Appendix A, except the instrument response factor criteria in §3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, air, or other inerts which are not organic HAP or VOC, the average stream response factor shall be calculated on an inert-free basis. [§63.1258(h)(3)(ii)(A)]
 - (2) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1258(h)(3)(ii)(A), the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in §63.1258(h)(3)(ii)(A). [§63.1258(h)(3)(ii)(B)]
 - iii) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of NSPS Appendix A. [§63.1258(h)(3)(iii)]
 - iv) Calibration gases shall be as follows: [§63.1258(h)(3)(iv)]
 - (1) Zero air (less than 10 ppm hydrocarbon in air); and [§63.1258(h)(3)(iv)(A)]
 - (2) Mixtures of methane in air at a concentration less than 10,000 ppm. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in §63.1258(h)(2)(ii)(A). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. [§63.1258(h)(3)(iv)(B)]
 - v) The permittee may elect to adjust or not adjust instrument readings for background. If the permittee elects to not adjust readings for background, all such instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If the permittee elects to adjust instrument readings for background, the permittee shall measure background concentration using the procedures in §63.180(b) and (c). The permittee shall subtract background reading from the maximum concentration indicated by the instrument. [§63.1258(h)(3)(v)]
 - vi) The background level shall be determined according to the procedures in Method 21 of NSPS Appendix A. [§63.1258(h)(3)(vi)]
 - vii) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 ppm for determining compliance. [§63.1258(h)(3)(vii)]
- d) Leaks, as indicated by an instrument reading greater than 500 ppm above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1258(h)(5). [§63.1258(h)(4)]

- i) A first attempt at repair shall be made no later than five calendar days after the leak is detected. [§63.1258(h)(4)(i)]
 - ii) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in §63.1258(h)(4)(iii). [§63.1258(h)(4)(ii)]
 - iii) For leaks found in vapor collection systems used for transfer operations, repairs shall be completed no later than 15 calendar days after the leak is detected or at the beginning of the next transfer loading operation, whichever is later. [§63.1258(h)(4)(iii)]
 - e) Delay of repair of a vapor collection system, closed-vent system, fixed roof, cover, or enclosure for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in §63.1251, or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown. [§63.1258(h)(5)]
 - f) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1258(h)(8), as unsafe to inspect are exempt from the inspection requirements of §63.1258(h)(2)(i), (ii), and (iii) if: [§63.1258(h)(6)]
 - i) The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with §63.1258(h)(2)(i), (ii), or (iii); and [§63.1258(h)(6)(i)]
 - ii) The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times. [§63.1258(h)(6)(ii)]
 - g) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1258(h)(8), as difficult to inspect are exempt from the inspection requirements of §63.1258(h)(2)(i), (ii), and (iii)(A) if: [§63.1258(h)(7)]
 - i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 m above a support surface; and [§63.1258(h)(7)(i)]
 - ii) The permittee has a written plan that requires inspection of the equipment at least once every five years. [§63.1258(h)(7)(ii)]
 - h) Records shall be maintained as specified in §63.1259(i)(4) through (9). [§63.1258(h)(8)]
 - i) If a closed-vent system subject to §63.1258 is also subject to the equipment leak provisions of §63.1255, the permittee shall comply with the provisions of §63.1255 and is exempt from the requirements of §63.1258. [§63.1258(h)(9)]
 - j) Instead of complying with the provisions of §63.1258(h)(2) through (8), the permittee may design a closed-vent system to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the associated control device is operating. [§63.1258(h)(10)]
9. Planned routine maintenance. During periods of planned routine maintenance when organic HAP emissions are controlled as specified in §63.1252(h)(2), the permittee shall monitor the condenser outlet gas temperature according to the procedures specified in §63.1258(b)(1)(iii). During periods of planned routine maintenance when HCl emissions are controlled as specified in §63.1252(h)(3), the permittee shall monitor the pH of the scrubber effluent once per day. [§63.1258(i)]

Table 7 to MACT GGG – Wastewater – Inspection and Monitoring Requirements for Waste Management Units

Emission Source	To comply with	Inspection or monitoring requirement	Frequency of inspection or monitoring	Method
Tanks	63.1256(b)(3)(i)	Inspect fixed roof and all openings for leaks	Initially Semiannually	Visual.
	63.1256(b)(4)	Inspect floating roof in accordance with §§63.120(a)(2) and (a)(3)	See §§63.120(a)(2) and (a)(3)	Visual.
	63.1256(b)(5)	Measure floating roof seal gaps in accordance with §§63.120(b)(2)(i) through (b)(4)		See §63.120(b)(2)(i) through (b)(4).
		—Primary seal gaps	Initially Once every 5 years (annually if no secondary seal).	
		—Secondary seal gaps	Initially Semiannually	
63.1256(b)(7) 63.1256(b)(8)	Inspect wastewater tank for control equipment failures and improper work practices	Initially Semiannually	Visual.	
Surface Impoundments	63.1256(c)(1)(i)	Inspect cover and all openings for leaks	Initially Semiannually	Visual.
	63.1256(c)(2)	Inspect surface impoundment for control equipment failures and improper work practices	Initially Semiannually	Visual.
Containers	63.1256(d)(1)(i) 63.1256(d)(1)(ii)	Inspect cover and all openings for leaks	Initially Semiannually	Visual.
	63.1256(d)(3)(i)	Inspect enclosure and all openings for leaks	Initially Semiannually	Visual.
	63.1256(d)(4)	Inspect container for control equipment failures and improper work practices	Initially Semiannually	Visual.
Individual Drain Systems ¹⁶	63.1256(e)(1)(i)	Inspect cover and all openings to ensure there are no gaps, cracks, or holes	Initially Semiannually	Visual.
	63.1256(e)(2)	Inspect individual drain system for control equipment failures and improper work practices	Initially Semiannually	Visual.
	63.1256(e)(4)(i)	Verify that sufficient water is present to properly maintain integrity of water seals	Initially Semiannually	Visual.
	63.1256(e)(4)(ii)	Inspect all drains using	Initially	Visual.

¹⁶ As specified in §63.1256(e), the permittee shall comply with either the requirements of §63.1256(e)(1) and (2) or §63.1256(e)(4) and (5).

	63.1256(e)(5)(i)	tightly-fitted caps or plugs to ensure caps and plugs are in place and properly installed	Semiannually	
	63.1256(e)(5)(ii)	Inspect all junction boxes to ensure covers are in place and have no visible gaps, cracks, or holes	Initially Semiannually	Visual or smoke test or other means as specified.
	63.1256(e)(5)(iii)	Inspect unburied portion of all sewer lines for cracks and gaps	Initially Semiannually	Visual.
Oil-Water Separators	63.1256(f)(2)(i)	Inspect fixed roof and all openings for leaks	Initially Semiannually	Visual.
	63.1256(f)(3)	Measure floating roof seal gaps in accordance with 40 CFR 60.696(d)(1)	Initially ¹⁷	See 40 CFR 60.696(d)(1).
		—Primary seal gaps	Once every 5 years.	
		—Secondary seal gaps	Initially ¹⁵ Annually.	
63.1256(f)(4)	Inspect oil-water separator for control equipment failures and improper work practices	Initially Semiannually	Visual.	

Recordkeeping:

1. Requirements of MACT A. The permittee shall comply with the recordkeeping requirements in MACT A of this part as specified in Table 1 of MACT GGG and in §63.1259(a)(1) through (5). [§63.1259(a)]
 - a) Data retention. The permittee shall keep copies of all records and reports required by MACT GGG for at least five years, as specified in §63.10(b)(1). [§63.1259(a)(1)]
 - b) Records of applicability determinations. If the permittee is not subject to MACT GGG, the permittee shall keep a record of the applicability determination, as specified in §63.10(b)(3). [§63.1259(a)(2)]
 - c) Malfunction records. The permittee shall maintain records of the occurrence and duration of each malfunction of operation (i.e., process equipment), air pollution control equipment, or monitoring equipment. The permittee shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with §63.1250(g)(3), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.1259(a)(3)]
 - d) Recordkeeping requirements for sources with continuous monitoring systems. If the permittee elects to install a continuous monitoring system, the permittee shall maintain records specified in §63.10(c)(1) through (14). [§63.1259(a)(4)]
 - e) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions in §63.5 regarding construction and reconstruction, excluding the provisions specified in §63.5(d)(1)(ii)(H), (d)(2), and (d)(3)(ii). [§63.1259(a)(5)]
2. Records of equipment operation. The permittee shall keep the following records up-to-date and readily accessible: [§63.1259(b)]

¹⁷ Within 60 days of installation as specified in §63.1256(f)(3).

- a) Each measurement of a control device operating parameter monitored in accordance with §63.1258 and each measurement of a treatment process parameter monitored in accordance with §63.1258(g)(2) and (3). [§63.1259(b)(1)]
- b) For processes subject to §63.1252(e), records of consumption, production, and the rolling average values of the production-indexed HAP and VOC consumption factors. [§63.1259(b)(2)]
- c) For each continuous monitoring system used to comply with MACT GGG, records documenting the completion of calibration checks and maintenance of continuous monitoring systems. [§63.1259(b)(3)]
- d) For purposes of compliance with the annual mass limits of §63.1254(a)(2) and (b)(2), daily records of the rolling annual total emissions. [§63.1259(b)(4)]
- e) Records of the following, as appropriate: [§63.1259(b)(5)]
 - i) For processes that are in compliance with the percent reduction requirements of §63.1254(a)(1) or (b)(1) and that contain vents controlled to less than the percent reduction requirement, the records specified in §63.1259(b)(5)(i)(A) through (C) are required. [§63.1259(b)(5)(i)]
 - (1) Standard batch uncontrolled and controlled emissions for each process; [§63.1259(b)(5)(i)(A)]
 - (2) Actual uncontrolled and controlled emissions for each nonstandard batch; and [§63.1259(b)(5)(i)(B)]
 - (3) A record whether each batch operated was considered a standard batch. [§63.1259(b)(5)(i)(C)]
 - ii) For processes in compliance with the annual mass limits of §63.1254(a)(2) or (b)(2), the following records are required: [§63.1259(b)(5)(ii)]
 - (1) The number of batches per year for each batch process; [§63.1259(b)(5)(ii)(A)]
 - (2) The operating hours per year for continuous processes; [§63.1259(b)(5)(ii)(B)]
 - (3) Standard batch uncontrolled and controlled emissions for each process; [§63.1259(b)(5)(ii)(C)]
 - (4) Actual controlled emissions for each batch operated during periods of planned routine maintenance of a CCCD, calculated according to §63.1258(c). [§63.1259(b)(5)(ii)(D)]
 - (5) Actual uncontrolled and controlled emissions for each nonstandard batch; [§63.1259(b)(5)(ii)(E)]
 - (6) A record whether each batch operated was considered a standard batch. [§63.1259(b)(5)(ii)(F)]
- f) Wastewater concentration per POD or process, except as provided in §63.1256(a)(1)(ii). [§63.1259(b)(6)]
- g) Number of storage tank turnovers per year, if used in an emissions average. [§63.1259(b)(7)]
- h) A schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [§63.1259(b)(8)]
- i) Description of worst-case operating conditions as required in §63.1257(b)(8). [§63.1259(b)(9)]
- j) Periods of planned routine maintenance as described in §§63.1252(h) and 63.1257(c)(5). [§63.1259(b)(10)]
- k) If the permittee elects to comply with §63.1253(b) or (c) by installing a floating roof, the permittee shall keep records of each inspection and seal gap measurement in accordance with §63.123(c) through (e) as applicable. [§63.1259(b)(11)]
- l) If the permittee elects to comply with the vapor balancing alternative in §63.1253(f), the permittee shall keep records of the DOT certification required by §63.1253(f)(2) and the pressure relief vent setting and the leak detection records specified in §63.1253(f)(5). [§63.1259(b)(12)]

- m) All maintenance performed on the air pollution control equipment. [§63.1259(b)(13)]
- 3. Records of operating scenarios. The permittee shall keep records of each operating scenario which demonstrates compliance with MACT GGG. [§63.1259(c)]
- 4. Records of equipment leak detection and repair programs. If implementing the leak detection and repair (LDAR) program specified in §63.1255, the permittee shall implement the recordkeeping requirements in §63.1255. [§63.1259(d)]
- 5. Records of emissions averaging. If the permittee chooses to comply with the requirements of §63.1252(d), the permittee shall maintain up-to-date records of the following information: [§63.1259(e)]
 - a) An Implementation Plan which shall include in the plan, for all process vents and storage tanks included in each of the averages, the information listed in §63.1259(e)(1)(i) through (v). [§63.1259(e)(1)]
 - i) The identification of all process vents and storage tanks in each emissions average. [§63.1259(e)(1)(i)]
 - ii) The uncontrolled and controlled emissions of HAP and the overall percent reduction efficiency as determined in §§63.1257(g)(1) through (4) or 63.1257(h)(1) through (3) as applicable. [§63.1259(e)(1)(ii)]
 - iii) The calculations used to obtain the uncontrolled and controlled HAP emissions and the overall percent reduction efficiency. [§63.1259(e)(1)(iii)]
 - iv) The estimated values for all parameters required to be monitored under §63.1258(f) for each process and storage tank included in an average. [§63.1259(e)(1)(iv)]
 - v) A statement that the compliance demonstration, monitoring, inspection, recordkeeping and reporting provisions in §§63.1257(g) and (h), 63.1258(f), and 63.1260(k) that are applicable to each emission point in the emissions average will be implemented beginning on the date of compliance. [§63.1259(e)(1)(v)]
 - b) The Implementation Plan shall demonstrate that the emissions from the processes and storage tanks proposed to be included in the average will not result in greater hazard or, at the option of the operating permit authority, greater risk to human health or the environment than if the storage tanks and process vents were controlled according to the provisions in §§63.1253 and 63.1254, respectively. [§63.1259(e)(2)]
 - i) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the operating permit authority. [§63.1259(e)(2)(i)]
 - (1) The Director may require the permittee to use specific methodologies and procedures for making a hazard or risk determination. [§63.1259(e)(2)(i)(A)]
 - (2) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that the Director makes available for use or any other technically sound information or methods. [§63.1259(e)(2)(i)(B)]
 - ii) An emissions averaging plan that does not demonstrate hazard or risk equivalency to the satisfaction of the Director shall not be approved. The Director may require such adjustments to the emissions averaging plan as are necessary in order to ensure that the average will not result in greater hazard or risk to human health or the environment than would result if the emission points were controlled according to §§63.1253 and 63.1254. [§63.1259(e)(2)(ii)]
 - iii) A hazard or risk equivalency demonstration must: [§63.1259(e)(2)(iii)]
 - (1) Be a quantitative, comparative chemical hazard or risk assessment; [§63.1259(e)(2)(iii)(A)]

- (2) Account for differences between averaging and non-averaging options in chemical hazard or risk to human health or the environment; and [§63.1259(e)(2)(iii)(B)]
- (3) Meet any requirements set by the Director for such demonstrations.
[§63.1259(e)(2)(iii)(C)]
- c) Records as specified in §63.1259(a), (b) and (d). [§63.1259(e)(3)]
- d) A rolling quarterly calculation of the annual percent reduction efficiency as specified in §63.1257(g) and (h). [§63.1259(e)(4)]
- 6. Records of delay of repair. Documentation of a decision to use a delay of repair due to unavailability of parts, as specified in §63.1256(i), shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept onsite and when delivery from the manufacturer is scheduled), and the date when the repair was completed. [§63.1259(f)]
- 7. Record of wastewater stream or residual transfer. If transferring an affected wastewater stream or residual removed from an affected wastewater stream in accordance with §63.1256(a)(5), the permittee shall keep a record of the notice sent to the treatment operator stating that the wastewater stream or residual contains organic HAP which are required to be managed and treated in accordance with the provisions of MACT GGG. [§63.1259(g)]
- 8. Records of extensions. The permittee shall keep documentation of a decision to use an extension, as specified in §63.1256(b)(6)(ii) or (b)(9), in a readily accessible location. The documentation shall include a description of the failure, documentation that alternate storage capacity is unavailable, and specification of a schedule of actions that will ensure that the control equipment will be repaired and the tank will be emptied as soon as practical. [§63.1259(h)]
- 9. Records of inspections. The permittee shall keep records specified in §63.1259(i)(1) through (9). [§63.1259(i)]
 - a) A record that each waste management unit inspection required by §63.1256(b) through (f) was performed. [§63.1259(i)(1)]
 - b) A record that each inspection for control devices required by §63.1256(h) was performed. [§63.1259(i)(2)]
 - c) A record of the results of each seal gap measurement required by §63.1256(b)(5) and (f)(3). The records shall include the date of measurement, the raw data obtained in the measurement, and the calculations described in §63.120(b)(2) through (4). [§63.1259(i)(3)]
 - d) Records identifying all parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect in accordance with §63.1258(h)(6), an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment. [§63.1259(i)(4)]
 - e) Records identifying all parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as difficult to inspect in accordance with §63.1258(h)(7), an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment. [§63.1259(i)(5)]
 - f) For each vapor collection system or closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the permittee shall keep a record of the information specified in either §63.1259(i)(6)(i) or (ii). [§63.1259(i)(6)]
 - i) Hourly records of whether the flow indicator specified under §63.1252(b)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the flow indicator is not operating. [§63.1259(i)(6)(i)]

- ii) Where a seal mechanism is used to comply with §63.1252(b)(2), hourly records of flow are not required. In such cases, the permittee shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken. [§63.1259(i)(6)(ii)]
 - g) For each inspection conducted in accordance with §63.1258(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1259(i)(7)(i) through (ix). [§63.1259(i)(7)]
 - i) Identification of the leaking equipment. [§63.1259(i)(7)(i)]
 - ii) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1258(h)(3); or a record that the leak was detected by sensory observations. [§63.1259(i)(7)(ii)]
 - iii) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1259(i)(7)(iii)]
 - iv) Maximum instrument reading measured by the method specified in §63.1258(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1259(i)(7)(iv)]
 - v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1259(i)(7)(v)]
 - vi) The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1259(i)(7)(vi)]
 - vii) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1259(i)(7)(vii)]
 - viii) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1259(i)(7)(viii)]
 - ix) The date of successful repair of the leak. [§63.1259(i)(7)(ix)]
 - h) For each inspection conducted in accordance with §63.1258(h)(3) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1259(i)(8)]
 - i) For each visual inspection conducted in accordance with §63.1258(h)(2)(i)(B) or (h)(2)(iii)(B) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1259(i)(9)]
10. These records shall be made available immediately for inspection to the Department of Natural Resources’ personnel upon request.
11. All records shall be maintained for five years.

Reporting:

1. The permittee shall comply with the reporting requirements of §63.1260(b) through (n). Applicable reporting requirements of §§63.9 and 63.10 are also summarized in Table 1 of MACT GGG. [§63.1260(a)]
2. Initial notification. The permittee shall submit the applicable initial notification in accordance with §63.9(b) or (d). [§63.1260(b)]
3. Application for approval of construction or reconstruction. If subject to §63.5(b)(3), the permittee shall submit to the Director an application for approval of the construction of a new major affected source, the reconstruction of a major affected source, or the reconstruction of a major source such that the source becomes a major affected source subject to the standards. The application shall be prepared in accordance with §63.5(d). [§63.1260(c)]

4. Notification of CMS performance evaluation. If the permittee is required by the Director to conduct a performance evaluation for a continuous monitoring system, the permittee shall notify the Director of the date of the performance evaluation as specified in §63.8(e)(2). [§63.1260(d)]
5. Precompliance report. The Precompliance report shall be submitted at least six months prior to the compliance date of the standard. For new sources, the Precompliance report shall be submitted to the Director with the application for approval of construction or reconstruction. The Director shall have 90 days to approve or disapprove the plan. The plan shall be considered approved if the Director either approves the plan in writing, or fails to disapprove the plan in writing. The 90 day period shall begin when the Director receives the request. If the request is denied, the permittee shall still be in compliance with the standard by the compliance date. To change any of the information submitted in the report, the permittee shall notify the Director 90 days before the planned change is to be implemented; the change shall be considered approved if the Director either approves the change in writing, or fails to disapprove the change in writing. The Precompliance report shall include:
[§63.1260(e)]
 - a) Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to §63.1258(b)(4). [§63.1260(e)(1)]
 - b) Descriptions of the daily or per batch demonstrations to verify that control devices subject to §63.1258(b)(1)(i) are operating as designed. [§63.1260(e)(2)]
 - c) A description of test conditions, and the corresponding monitoring parameter values for parameters that are set according to §63.1258(b)(3)(ii)(C). [§63.1260(e)(3)]
 - d) If complying with the requirements of §63.1252(e), the P2 demonstration summary required in §63.1257(f). [§63.1260(e)(4)]
 - e) Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in §63.1257(d)(2)(ii). [§63.1260(e)(5)]
 - f) Data and other information supporting the determination of annual average concentrations by process simulation as required in §63.1257(e)(1)(ii). [§63.1260(e)(6)]
 - g) Bench scale or pilot-scale test data and rationale used to determine annual average concentrations as required in §63.1257(e)(1)(ii)(C). [§63.1260(e)(7)]
6. Notification of Compliance Status report. The Notification of Compliance Status report required under §63.9 shall be submitted no later than 150 days after the compliance date and shall include:
[§63.1260(f)]
 - a) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP emissions from the affected source. [§63.1260(f)(1)]
 - b) The results of emissions profiles, performance tests, engineering analyses, design evaluations, or calculations used to demonstrate compliance. For performance tests, results should include descriptions of sampling and analysis procedures and quality assurance procedures.
[§63.1260(f)(2)]
 - c) Descriptions of monitoring devices, monitoring frequencies, and the values of monitored parameters established during the initial compliance determinations, including data and calculations to support the levels established. [§63.1260(f)(3)]
 - d) Listing of all operating scenarios. [§63.1260(f)(4)]
 - e) Descriptions of worst-case operating and/or testing conditions for control devices.
[§63.1260(f)(5)]
 - f) Identification of emission points subject to overlapping requirements described in §63.1250(h) and the authority under which the permittee will comply. [§63.1260(f)(6)]
 - g) Anticipated periods of planned routine maintenance of a CCD subject to §63.1252(h) during the period between the compliance date and the end of the period covered by the first Periodic

report, and if applicable, the rationale for why the planned routine maintenance must be performed while a process with a vent subject to §63.1254(a)(3) will be operating.
[§63.1260(f)(7)]

7. Periodic reports. The permittee shall prepare Periodic reports in accordance with §63.1260(g)(1) and (2) and submit them to the Director. [§63.1260(g)]
- a) Submittal schedule. Except as provided in §63.1260(g)(1)(i), (ii), and (iii), the permittee shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the Notification of Compliance Status is due and shall cover the six-month period beginning on the date the Notification of Compliance Status is due. Each subsequent Periodic report shall cover the six-month period following the preceding period. [§63.1260(g)(1)]
- i) When the Director determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source; or [§63.1260(g)(1)(i)]
- ii) Quarterly reports shall be submitted when the source experiences an exceedance of a temperature limit monitored according to the provisions of §63.1258(b)(1)(iii) or an exceedance of the outlet concentration monitored according to the provisions of §63.1258(b)(1)(x) or (b)(5). Once an affected source reports quarterly, the affected source shall follow a quarterly reporting format until a request to reduce reporting frequency is approved. If the permittee submits a request to reduce the frequency of reporting, the provisions in §63.10(e)(3)(ii) and (iii) shall apply, except that the phrase “excess emissions and continuous monitoring system performance report and/or summary report” shall mean “Periodic report” for the purposes of §63.1260. [§63.1260(g)(1)(ii)]
- iii) When a new operating scenario has been operated since the last report, in which case quarterly reports shall be submitted. [§63.1260(g)(1)(iii)]
- b) Content of Periodic report. The permittee shall include the information in §63.1260(g)(2)(i) through (vii), as applicable. [§63.1260(g)(2)]
- i) Each Periodic report shall include the information in §63.10(e)(3)(vi)(A) through (I) and (K) through (M). For each continuous monitoring system, the Periodic report shall also include the information in §63.10(e)(3)(vi)(J). [§63.1260(g)(2)(i)]
- ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is one percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is five percent or greater of the total operating time for the reporting period, the Periodic report shall include the information in §63.1260(g)(2)(ii)(A) through (D). [§63.1260(g)(2)(ii)]
- (1) Monitoring data, including 15-minute monitoring values as well as daily average values of monitored parameters, for all operating days when the average values were outside the ranges established in the Notification of Compliance Status report or operating permit. [§63.1260(g)(2)(ii)(A)]
- (2) Duration of excursions, as defined in §63.1258(b)(7). [§63.1260(g)(2)(ii)(B)]
- (3) Operating logs and operating scenarios for all operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit. [§63.1260(g)(2)(ii)(C)]
- (4) When a continuous monitoring system is used, the information required in §63.10(c)(5) through (13). [§63.1260(g)(2)(ii)(D)]
- iii) For each inspection conducted in accordance with §63.1258(h)(2) or (3) during which a leak is detected, the records specified in §63.1259(i)(7) shall be included in the next Periodic report. [§63.1260(g)(2)(iii)]

- iv) For each vapor collection system or closed vent system with a bypass line subject to §63.1252(b)(1), records required under §63.1259(i)(6)(i) of all periods when the vent stream is diverted from the control device through a bypass line. For each vapor collection system or closed vent system with a bypass line subject to §63.1252(b)(2), records required under §63.1259(i)(6)(ii) of all periods in which the seal mechanism is broken, the bypass valve position has changed, or the key to unlock the bypass line valve was checked out. [§63.1260(g)(2)(iv)]
 - v) The information in §63.1260(g)(2)(v)(A) through (D) shall be stated in the Periodic report, when applicable. [§63.1260(g)(2)(v)]
 - (1) No excess emissions. [§63.1260(g)(2)(v)(A)]
 - (2) No exceedances of a parameter. [§63.1260(g)(2)(v)(B)]
 - (3) No excursions. [§63.1260(g)(2)(v)(C)]
 - (4) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted. [§63.1260(g)(2)(v)(D)]
 - vi) The information specified in §63.1260(g)(2)(vi)(A) through (C) for periods of planned routine maintenance. [§63.1260(g)(2)(vi)]
 - (1) For each storage tank subject to control requirements, periods of planned routine maintenance during which the control device does not meet the specifications of §63.1253(b) through (d). [§63.1260(g)(2)(vi)(A)]
 - (2) For a CCCD subject to §63.1252(h), periods of planned routine maintenance during the current reporting period and anticipated periods of planned routine maintenance during the next reporting period. [§63.1260(g)(2)(vi)(B)]
 - (3) Rationale for why planned routine maintenance of a CCCD subject to §63.1252(h) must be performed while a process with a vent subject to §63.1254(a)(3) will be operating, if applicable. This requirement applies only if the rationale is not in, or differs from that in, the Notification of Compliance Status report. [§63.1260(g)(2)(vi)(C)]
 - vii) Each new operating scenario which has been operated since the time period covered by the last Periodic report. For each new operating scenario, the permittee shall provide verification that the operating conditions for any associated control or treatment device have not been exceeded, and that any required calculations and engineering analyses have been performed. For the initial Periodic report, each operating scenario for each process operated since the due date of the Notification of Compliance Status Report shall be submitted. [§63.1260(g)(2)(vii)]
 - viii) If the permittee elects to comply with the provisions of §63.1253(b) or (c) by installing a floating roof, the permittee shall submit the information specified in §63.122(d) through (f) as applicable. References to §63.152 from §63.122 shall not apply for the purposes of MACT GGG. [§63.1260(g)(2)(viii)]
8. Notification of process change. [§63.1260(h)]
- a) Except as specified in §63.1260(h)(2), whenever a process change is made, or a change in any of the information submitted in the Notification of Compliance Status Report, the permittee shall submit the information specified in §63.1260(h)(1)(i) through (iv) with the next Periodic report required under §63.1260(g). [§63.1260(h)(1)]
 - i) A brief description of the process change. [§63.1260(h)(1)(i)]
 - ii) A description of any modifications to standard procedures or quality assurance procedures. [§63.1260(h)(1)(ii)]
 - iii) Revisions to any of the information reported in the original Notification of Compliance Status Report under §63.1260(f). [§63.1260(h)(1)(iii)]

- iv) Information required by the Notification of Compliance Status Report under §63.1260(f) for changes involving the addition of processes or equipment. [§63.1260(h)(1)(iv)]
- b) The permittee shall submit a report 60 days before the scheduled implementation date of either of the following: [§63.1260(h)(2)]
 - i) Any change in the activity covered by the Precompliance report. [§63.1260(h)(2)(i)]
 - ii) A change in the status of a control device from small to large. [§63.1260(h)(2)(ii)]
9. The permittee shall submit a report of 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 shall also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with §63.1250(g)(3), including actions taken to correct a malfunction. The report shall be submitted on the same schedule as the periodic reports required under §63.1260(g). [§63.1260(i)]
10. Reports of LDAR programs. If implementing the LDAR program specified in §63.1255, the permittee shall implement the reporting requirements in §63.1255. Copies of all reports shall be retained as records for a period of five years, in accordance with the requirements of §63.10(b)(1). [§63.1260(j)]
11. Reports of emissions averaging. If the permittee chooses to comply with the requirements of §63.1252(d), the permittee shall submit the implementation plan described in §63.1259(e) six months prior to the compliance date of the standard and the following information in the periodic reports: [§63.1260(k)]
 - a) The records specified in §63.1259(e) for each process or storage tank included in the emissions average; [§63.1260(k)(1)]
 - b) All information as specified in §63.1260(g) for each process or storage tank included in the emissions average; [§63.1260(k)(2)]
 - c) Any changes of the processes or storage tanks included in the average. [§63.1260(k)(3)]
 - d) The calculation of the overall percent reduction efficiency for the reporting period. [§63.1260(k)(4)]
 - e) Changes to the Implementation Plan which affect the calculation methodology of uncontrolled or controlled emissions or the hazard or risk equivalency determination. [§63.1260(k)(5)]
 - f) Every second semiannual or fourth quarterly report, as appropriate, shall include the results according to §63.1259(e)(4) to demonstrate the emissions averaging provisions of §§63.1252(d), 63.1257(g) and (h), 63.1258(f), and 63.1259(f) are satisfied. [§63.1260(k)(6)]
12. Notification of performance test and test plan. The permittee shall notify the Director of the planned date of a performance test at least 60 days before the test in accordance with §63.7(b). The permittee shall also submit the test plan required by §63.7(c) and the emission profile required by 63.1257(b)(8)(ii) with the notification of the performance test. [§63.1260(l)]
13. Request for extension of compliance. The permittee may submit to the Director a request for an extension of compliance in accordance with §63.1250(f)(4). [§63.1260(m)]
 - a) As of January 1, 2012, and within 60 days after the date of completing each performance test, as defined in §63.2 and as required in MACT GGG, the permittee shall submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the ERT (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.1260(n)(1)]
 - b) If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to §63.1260(n)(1) in paper format. [§63.1260(n)(2)]

14. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION PW002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart H – National Emission Standards for Organic Hazardous Air Pollutants for
Equipment Leaks
40 CFR Part 63, Subpart GGG – National Emission Standards for Pharmaceuticals Production

Compressor Standards:

1. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in §63.1225(a) and §63.164(h) and (i). [§63.164(a)]
2. Each compressor seal system as required in §63.164(a) shall be: [§63.164(b)]
 - a) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]
 - b) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of §63.172; or [§63.164(b)(2)]
 - c) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream. [§63.164(b)(3)]
3. The barrier fluid shall not be in light liquid service. [§63.164(c)]
4. Each barrier fluid system as described in §63.164(a) through (c) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. [§63.164(d)]
 - a) Each sensor as required in §63.164(d) shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site. [§63.164(e)(1)]
 - b) The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. [§63.164(e)(2)]
5. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under §63.164(e)(2), a leak is detected. [§63.164(f)]
 - a) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171. [§63.164(g)(1)]
 - b) A first attempt at repair shall be made no later than five calendar days after each leak is detected. [§63.164(g)(2)]
6. A compressor is exempt from the requirements of §63.164(a) through (g) if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of §63.172. [§63.164(h)]
7. Any compressor that is designated, as described in §63.1255(g), to operate with an instrument reading of less than 500 ppm above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i)]
 - a) Is demonstrated to be operating with an instrument reading of less than 500 ppm above background, as measured by the method specified in §63.180(c); and [§63.164(i)(1)]
 - b) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Director. [§63.164(i)(2)]

Standards for Pressure Relief Devices in Gas/Vapor Service:

1. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 ppm above background except as provided in §63.165(b), as measured by the method specified in §63.180(c). [§63.165(a)]
 - a) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than five calendar days after each pressure release, except as provided in §63.171. [§63.165(b)(1)]
 - b) No later than five calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in §63.180(c). [§63.165(b)(2)]
2. Any pressure relief device that is routed to a group of MACT GGG processes or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.172 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]
3. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of §63.165(a) and (b), provided the permittee complies with the requirements in §63.165(d)(2). [§63.165(d)(1)]
4. After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than five calendar days after each pressure release, except as provided in §63.171. [§63.165(d)(2)]

Standards for Sampling Connection Systems:

1. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §63.1255(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a)]
2. Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]
 - a) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]
 - b) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]
 - c) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.172; or [§63.166(b)(3)]
 - d) Collect, store, and transport the purged process fluid to a system or facility identified in §63.166(b)(4)(i), (ii), or (iii). [§63.166(b)(4)]
 - i) A waste management unit as defined in §63.111, if the waste management unit is subject to, and operated in compliance with the provisions of MACT G applicable to group one wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of MACT G, the waste management unit need not be subject to, and operated in compliance with the requirements of MACT G applicable to group one wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]
 - ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]
 - iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR Part 261. [§63.166(b)(4)(iii)]

3. In-situ sampling systems and sampling systems without purges are exempt from the requirements of §63.166(a) and (b). [§63.166(c)]

Standards for Pumps, Valves, Connectors, and Agitators in Heavy Liquid Service; Instrumentation Systems; and Pressure Relief Devices in Liquid Service:

1. Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within five calendar days by the method specified in §63.180(b) if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in §63.169(c) and (d), it is not necessary to monitor the system for leaks by the method specified in §63.180(b). [§63.169(a)]
2. If an instrument reading of 10,000 ppm or greater for agitators, 5,000 ppm or greater for pumps handling polymerizing monomers, 2,000 ppm or greater for all other pumps (including pumps in food/medical service), or 500 ppm or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]
 - a) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §63.171. [§63.169(c)(1)]
 - b) The first attempt at repair shall be made no later than five calendar days after each leak is detected. [§63.169(c)(2)]
 - c) For equipment identified in §63.169(a) that is not monitored by the method specified in §63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure. [§63.169(c)(3)]
3. First attempts at repair include, but are not limited to, the practices described under §§63.1255(c) and (e), for pumps and valves, respectively. [§63.169(d)]

Delay of Repair Standards:

1. Delay of repair of equipment for which leaks have been detected is allowed if one of the conditions in §63.1255(b)(4)(i)(A) through (B) exists: [§63.1255(b)(4)(i)]
 - a) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1255(b)(4)(i)(A)]
 - b) The permittee determines that repair personnel would be exposed to an immediate danger if attempting to repair without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1255(b)(4)(i)(B)]
2. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service. [§63.171(b)]
3. Delay of repair for valves, connectors, and agitators is also allowed if: [§63.171(c)]
 - a) The permittee determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and [§63.171(c)(1)]
 - b) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.172. [§63.171(c)(2)]
4. Delay of repair for pumps is also allowed if: [§63.171(d)]
 - a) Repair requires replacing the existing seal design with a new system that the permittee has determined will provide better performance or: [§63.171(d)(1)]

- i) A dual mechanical seal system that meets the requirements of §63.1255(c), [§63.171(d)(1)(i)]
 - ii) A pump that meets the requirements of §63.1255(c), or [§63.171(d)(1)(ii)]
 - iii) A closed-vent system and control device that meets the requirements of §63.1255(c); and [§63.171(d)(1)(iii)]
 - b) Repair is completed as soon as practicable, but not later than six months after the leak was detected. [§63.171(d)(2)]
5. Delay of repair beyond a shutdown of the MACT GGG group of processes will be allowed for a valve if valve assembly replacement is necessary during the shutdown of the MACT GGG group of processes, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the shutdown of the MACT GGG group of processes will not be allowed unless the third shutdown of the MACT GGG group of processes occurs sooner than six months after the first shutdown of the MACT GGG group of processes. [§63.171(e)]

Standards for Closed-Vent Systems and Control Devices:

1. Closed-vent systems and control devices used to comply with provisions of MACT H shall comply with the provisions of §63.172, except as provided in §63.1255(a). [§63.172(a)]
2. Recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic HAP emissions or VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, whichever is less stringent. The 20 ppmv performance standard is not applicable to the provisions of §63.179. [§63.172(b)]
3. Enclosed combustion devices shall be designed and operated to reduce the organic HAP emissions or VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to three percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760°C. [§63.172(c)]
4. The permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]
5. Except as provided in §63.1255(f), each closed-vent system shall be inspected according to the procedures and schedule specified in §63.172(f)(1) and (f)(2). [§63.172(f)]
 - a) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]
 - i) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]
 - ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]
 - b) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]
 - i) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(2)(i)]
 - ii) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]
6. The permittee may, instead of complying with the provisions of §63.172(f), design a closed-vent system to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gage or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the associated control device is operating. [§63.1255(b)(4)(ii)(B)]

7. The requirements apply at all times, except as specified in §63.1250(g). The permittee may not comply with the planned routine maintenance provisions in §63.1252(h). [§63.1255(b)(4)(ii)(C)]
8. Each closed-vent system shall be inspected according to the procedures in §63.180(b). [§63.172(g)]
9. Leaks, as indicated by an instrument reading greater than 500 ppm above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i). [§63.172(h)]
 - a) A first attempt at repair shall be made no later than five calendar days after the leak is detected. [§63.172(h)(1)]
 - b) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in §63.172(i). [§63.172(h)(2)]
10. Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a MACT GGG group of processes shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next MACT GGG group of processes shutdown. [§63.172(i)]
11. For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the permittee shall comply with the provisions of either §63.172(j)(1) or (j)(2), except as provided in §63.172(j)(3). [§63.172(j)]
 - a) Install, set or adjust, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in §63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]
 - b) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. [§63.172(j)(2)]
 - c) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph. [§63.172(j)(3)]
12. Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of MACT H, such system or control device shall be operating. [§63.172(m)]
13. After the compliance dates specified in §63.100, any control device subject to MACT H that is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR Part 264, Subpart BB, or is subject to monitoring and recordkeeping requirements in 40 CFR Part 265, Subpart BB, may elect to comply either with the monitoring, recordkeeping, and reporting requirements of MACT H, or with the monitoring, recordkeeping, and reporting requirements in 40 CFR Parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, recordkeeping and reporting requirements of MACT H. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1255(h). [§63.172(n)]

Standards for Connectors in Gas/Vapor Service and in Light Liquid Service:

1. The permittee shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1255(a) and (f), at the intervals specified in §63.174(b). [§63.174(a)]
 - a) The connectors shall be monitored to detect leaks by the method specified in §63.180(b). [§63.174(a)(1)]
 - b) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected. [§63.174(a)(2)]

2. The permittee shall monitor for leaks at the intervals specified in either §63.174(b)(1) or (b)(2) and in §63.1255(b)(4)(iii)(B) through (F). [§63.174(b)]
 - a) For each existing MACT GGG group of processes, by no later than 12 months after the compliance date, the permittee shall monitor all connectors, except as provided in §63.1255(f). [§63.174(b)(1)]
 - b) For new sources, within the first 12 months after initial start-up or by no later than 12 months after the date of promulgation of MACT GGG, whichever is later, the permittee shall monitor all connectors, except as provided in §63.1255(f). [§63.174(b)(2)]
 - c) If the percent leaking connectors in a group of processes was greater than or equal to 0.5 percent during the initial monitoring period, monitoring shall be performed once per year until the percent leaking connectors is less than 0.5 percent. [§63.1255(b)(4)(iii)(B)]
 - d) If the percent leaking connectors in the group of processes was less than 0.5 percent, but equal to or greater than 0.25 percent, during the initial or last required monitoring period, the permittee may elect to monitor once every four years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first two years and the remainder of the connectors within the next two years. The percent leaking connectors will be calculated for the total of all required monitoring performed during the four-year period. [§63.1255(b)(4)(iii)(C)]
 - e) Except as provided in §63.1255(b)(4)(iii)(B), if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors during the last monitoring period, the permittee shall monitor at least once every two years for the next monitoring period. At the end of that two-year monitoring period, if the percent leaking connectors is greater than or equal to 0.5 percent, the permittee shall monitor once per year until the percent leaking connectors is less than 0.5 percent. If, at the end of a monitoring period, the percent leaking connectors is less than 0.5 percent, the permittee shall monitor in accordance with §63.1255(b)(4)(iii)(C) or (F), as appropriate. [§63.1255(b)(4)(iii)(D)]
 - f) If the permittee determines that one percent or greater of the connectors in a group of processes are leaking, the permittee shall monitor the connectors once per year. The permittee may elect to use the provisions of §63.1255(b)(4)(iii)(C), (D), or (F), as appropriate, after a monitoring period in which less than one percent of the connectors are determined to be leaking. [§63.1255(b)(4)(iii)(E)]
 - g) The permittee may elect to perform monitoring once every eight years if the percent leaking connectors in the group of processes was less than 0.25 percent during the initial or last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first four years and the remainder of the connectors within the next four years. If the percent leaking connectors in the first four years is equal to or greater than 0.35 percent, the monitoring program shall revert at that time to the appropriate monitoring frequency specified in §63.1255(b)(4)(iii)(C), (D), or (E). [§63.1255(b)(4)(iii)(F)]
 - h) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of §63.180(b)(6). [§63.174(b)(4)]
 - i) Except as provided in §63.174(c)(1)(ii), each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first three months after being returned to organic HAP service. If the monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d), unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of §63.174(i)(2). [§63.174(c)(1)(i)]

- ii) As an alternative to the requirements in §63.174(c)(1)(i), the permittee may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the permittee may not count nonrepairable connectors for the purposes of §63.174(i)(2). The permittee shall calculate the percent leaking connectors for the monitoring periods described in §63.174(b), by setting the nonrepairable component, C_{AN} , in the equation in §63.174(i)(2) to zero for all monitoring periods. [§63.174(c)(1)(ii)]
 - iii) The permittee may switch alternatives described in §63.174(c)(1)(i) and (ii) at the end of the current monitoring period they are in, provided that it is reported as required in §63.1255(h) and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch.
[§63.174(c)(1)(iii)]
3. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §63.1255(f) and in §63.171. A first attempt at repair shall be made no later than five calendar days after the leak is detected. [§63.174(d)]
 4. For use in determining the monitoring frequency, as specified in §63.174(b) and §63.1125(b)(4)(iii)(B) through (F), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]
 - a) For the first monitoring period, use the following equation:

$$\%C_L = \frac{C_L}{(C_t + C_C)} \times 100$$

where:

$\% C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and (b) and §63.1255(b)(4)(iii)(B) through (F).

C_L = Number of connectors measured at 500 ppm or greater, by the method specified in §63.180(b).

C_t = Total number of monitored connectors in the process unit.

C_C = Optional credit for removed connectors = $0.67 \times$ net (i.e., total removed—total added) number of connectors in organic HAP service removed from the MACT GGG group of processes after the compliance date set forth in MACT GGG for existing MACT GGG group of processes, and after the date of initial start-up for new MACT GGG group of processes. If credits are not taken, then $C_C = 0$. [§63.174(i)(1)]

- b) For subsequent monitoring periods, use the following equation:

$$\%C_L = \frac{(C_L - C_{AN})}{(C_t + C_C)} \times 100$$

where:

$\% C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and (b) and §63.1255(b)(4)(iii)(B) through (F).

C_L = Number of connectors, including nonrepairables, measured at 500 ppm or greater, by the method specified in §63.180(b).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1255(b)(4)(ii)(B) through (F) and §63.174(c), not to exceed two percent of the total connector population, C_t .

C_t = Total number of monitored connectors, including nonrepairables, in the MACT group of processes.

C_C = Optional credit for removed connectors = $0.67 \times$ net number (i.e., total removed—total added) of connectors in organic HAP service removed from the MACT GGG group of processes

after the compliance date set forth in MACT GGG for existing MACT GGG group of processes, and after the date of initial start-up for new MACT GGG group of process. If credits are not taken, then $C_c = 0$. [§63.174(i)(2)]

5. Optional credit for removed connectors. If the permittee eliminates a connector subject to monitoring under §63.174(b) and §63.1255(b)(4)(iii)(B) through (F), the permittee may receive credit for elimination of the connector, as described in §63.174(i), provided the requirements in §63.174(j)(1) through (j)(4) are met. [§63.174(j)]
 - a) The connector was welded after the date of proposal of MACT GGG. [§63.174(j)(1)]
 - b) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]
 - c) Welds created after the date of proposal but before the date of promulgation of MACT GGG are monitored or tested by three months after the compliance date specified in MACT GGG. [§63.174(j)(3)]
 - d) Welds created after promulgation of MACT GGG are monitored or tested within three months after being welded. [§63.174(j)(4)]
 - e) If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is therefore not exempt from the provisions of MACT H. [§63.174(j)(5)]

General Alternative Means of Emission Limitation:

If the permittee seeks permission to use an alternative means of emission limitation under §112(h)(3) of the Act, such permission shall be governed by the following procedures in §63.177(b) through (e).

Alternative Means of Emission Limitation for Batch Processes:

The permittee may elect to comply with alternatives standards for batch processes as specified in §63.178. The requirements for pressure testing may be applied to all processes (not just batch processes) and to supply lines between storage and processing areas per §63.1255(b)(4)(iv)(A). For pumps, the phrase “at the frequencies specified in Table 1 of MACT H in §63.178(c)(3)(iii) shall mean “quarterly” for the purposes of MACT GGG per §63.1255(b)(4)(iv)(B).

Test Methods and Procedures:

The permittee shall comply with the test methods and procedures as specified in §63.180, except for §63.180(b)(4)(ii)(A) through (c) which shall not apply. Instead, calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 ppm methane for agitators; 2,000 ppm for pumps; and 500 ppm for all other equipment, except as provided in §63.180(b)(4)(iii) per §63.1255(b)(4)(v).

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

PERMIT CONDITION 001 10 CSR 10-6.060 Construction Permits Required Construction Permit 082003-002, Issued July 15, 2003
Emission Source
Methanol Reclamation in Continuous Distillation Column V-873
Toluene Reclamation in Continuous Distillation Column V-852
Cephalexin PMPU

Operational Limitations:

1. Special Condition 2.A: The permittee shall control emissions from R-605 Silylation Reactor, R-601 Condensation Reactor, R-602 Hydrolysis Reactor/Phase Separation, R-604 Crystallization Reactor, T417 Tank, T616 Tank, N-601/N-602 Centrifuges, R-303 Toluene Wash/Recovery Vessel, N-501 Centrifuge, and D-601 Fluid Bed Dryer associated with the Cephalexin PMPU, the methanol distillation column V-873, and the toluene distillation column V-852 using a regenerative thermal oxidizer (RTO). The RTO shall be in use at all times the listed emission sources are in operation. The RTO shall be operated and maintained in accordance with the manufacturer's specifications.
2. The permittee shall operate the RTO at a temperature greater than or equal to 1550°F until subsequent testing occurs after permit issuance¹⁸.
3. The permittee shall conduct performance testing no later than 180 days following the issuance date of this operating permit to establish the minimum operating temperature required for the RTO to achieve the required MACT GGG destruction efficiency.
 - a) Testing shall occur within 10% of the maximum production rate.
 - b) A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
 - c) Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
 - d) The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.

Monitoring/Recordkeeping:

1. The permittee shall maintain a copy of the manufacturer's specifications on-site.

¹⁸ The required minimum operating temperature of the RTO may increase or decrease based on subsequent testing. The required minimum operating temperature shall be set to be the average observed temperature from the most recent RTO destruction testing which demonstrates compliance with MACT GGG.

2. The operating temperature of the RTO shall be continuously monitored and recorded during all time the listed emission sources are in operation.
3. The permittee shall assess the RTO's valve operation and leakage at least once annually.
4. Special Condition 2.B: The permittee shall maintain an operating and maintenance log for the RTO which shall include the following:
 - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
5. The permittee shall maintain a copy of all records for at least five years and shall make them available to Department of Natural Resources' personnel upon request.

Reporting:

1. The permittee shall report incidents of excess emissions lasting longer than one-hour due to start-up, shutdown, malfunction, or maintenance within two business days as required by 10 CSR 10-6.050.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 002 10 CSR 10-6.060 Construction Permits Required Construction Permit 092002-014, Issued August 20, 2002 & Construction Permit 0198-034, Issued January 20, 1998
Emission Source
Reactors and Tanks associated with the Amoxicillin PMPU
Methylene Chloride Reclamation
Acetone Reclamation

Operational Limitations:

1. The permittee shall control emissions from the reactors and tanks associated with the Amoxicillin PMPU using an activated carbon adsorption system.
2. Special Condition 1: The permittee shall equip the activated carbon adsorption system with a breakthrough monitor.
3. Special Condition 2: If breakthrough emissions occur, the permittee shall cease producing Amoxicillin until the activated carbon is replaced.

Monitoring/Recordkeeping:

1. Special Condition 3: The permittee shall maintain the following records:
 - a) The date, start time, and duration of each breakthrough or malfunction event resulting in excess emissions.
 - b) The probable cause of the excess emissions event.
 - c) Corrective action(s) taken to restore the carbon adsorption system to optimum operation.
 - d) An estimate of excess emissions from the event.
2. Special Condition 5: The permittee shall maintain documentation of control efficiency of the activated carbon absorption system onsite.
3. The permittee shall maintain a copy of all records for at least five years and shall make them available to Department of Natural Resources' personnel upon request.

Reporting:

1. Special Condition 4: The permittee shall report incidents of excess emissions lasting longer than one-hour due to start-up, shutdown, malfunction, or maintenance within two business days as required by 10 CSR 10-6.050.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 003	
10 CSR 10-6.060 Construction Permits Required	
Construction Permit 102001-011, Issued October 19, 2001,	
Construction Permit 0989-004, Issued September 25, 1989,	
No Construction Permit Required Determination, Issued October 27, 2005, &	
No Construction Permit Required Determination, Issued March 28, 2008	
Emission Source & Description	
Cephalexin, Cefadroxil, Cefprozil, and Cefdinir PMPUs	

Operational Limitation:

1. The permittee shall limit the combined production of Cephalexin, Cefadroxil, Cefprozil, and Cefdinir to 926 batches per consecutive 12-month period.
2. The equipment associated with the Cephalexin, Cefadroxil, Cefprozil, and Cefdinir PMPUs shall not be used to produce additional pharmaceuticals without written approval from the Air Pollution Control Program.

Monitoring/Recordkeeping:

1. The permittee shall maintain records of the number batches of Cephalexin, Cefadroxil, Cefprozil, and Cefdinir produced each month and calculate the 12-month rolling total number of batches using Attachment A or an equivalent form approved by the Air Pollution Control Program.
2. The permittee shall maintain a copy of all records for at least five years and shall make them available to Department of Natural Resources' personnel upon request.

Reporting:

1. Special Condition 1.C: The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176 Jefferson City, Missouri 65102, no later than ten days after the end of the month during which records indicate an exceedance of the operational limit.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 004	
10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants	
Emission Source	Description
Boiler	(2) 8.4 MMBtu/hr Boilers – natural gas with fuel oil #2 backup

Emission Limitation:

1. The permittee shall not cause or permit to be discharged into the atmosphere from these emission units any visible emissions with an opacity greater than 20 percent. [10 CSR 10-6.220(3)(A)1]

2. Exception: The permittee may discharge into the atmosphere from any source of emissions for a period aggregating not more than six minutes in any 60 minutes air contaminants with an opacity up to 60 percent. [10 CSR 10-6.220(3)(A)2]

Monitoring:

1. The permittee shall conduct opacity readings on these emission units when combusting fuel oil #2 using the procedures contained in U.S. EPA Test Method 22. Readings are only required when the emission units are operating and when the weather conditions allow. If no visible emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions, the source representative would then conduct a Method 9 observation.
2. The following monitoring schedule shall be maintained:
 - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then
 - b) Observations shall be made once every two weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then
 - c) Observations shall be made once per month. If a violation is noted, monitoring reverts to weekly.
3. If at the time of permit issuance the permittee has already progressed to conducting observations once every two weeks or once per month, the permittee may continue from that point in the schedule after permit issuance.
4. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Recordkeeping:

1. The permittee shall maintain records of all observation results (see Attachments C & D or equivalent forms approved by the Air Pollution Control Program), noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units and
 - b) All emission units from which visible emissions occurred.
2. The permittee shall maintain records of any equipment malfunctions using Attachment E or an equivalent form approved by the Air Pollution Control Program.
3. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.
4. All records shall be maintained for five years.

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after an exceedance of the opacity limitation.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 005	
10 CSR 10-6.070 New Source Performance Regulations	
40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	
Emission Source	Description
Boiler	16.3 MMBtu/hr Boiler – natural gas with fuel oil #2 backup

Standards for SO₂:

1. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the permittee shall not shall combust oil that contains greater than 0.5 weight percent sulfur. [§60.42c(d)]
2. Compliance with the fuel oil sulfur limits shall be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable. [§60.42c(h)]
3. The fuel oil sulfur limit applies at all times, including periods of startup, shutdown, and malfunction. [§60.42c(i)]

Compliance and Performance Test Methods and Procedures for SO₂:

The performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable. [§60.44c(h)]

Reporting and Recordkeeping Requirements:

1. The permittee shall submit reports to the Director. [§60.48c(d)]
2. The permittee shall keep records and submit reports as required under §60.48c(d), including the following information, as applicable. [§60.48c(e)]
 - a) Calendar dates covered in the reporting period. [§60.48c(e)(1)]
 - b) Records of fuel supplier certification as described under §60.48c(f)(1), (2), (3), or (4), as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the responsible official that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period. [§60.48c(e)(11)]
3. Fuel supplier certification shall include the following information: [§60.48c(f)]
 - a) For distillate oil: [§60.48c(f)(1)]
 - i) The name of the oil supplier; [§60.48c(f)(1)(i)]
 - ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and [§60.48c(f)(1)(ii)]
 - iii) The sulfur content or maximum sulfur content of the oil. [§60.48c(f)(1)(iii)]
4. Except as provided under §60.48c(g)(2) and (3), the permittee shall record and maintain records of the amount of each fuel combusted during each operating day. [§60.48c(g)(1)]
5. As an alternative to meeting the requirements of §60.48c(g)(1), the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month. [§60.48c(g)(2)]
6. As an alternative to meeting the requirements of §60.48c(g)(1) of this section, the permittee may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. [§60.48c(g)(3)]
7. The reporting period for the reports required under NSPS Dc is each six-month period. All reports shall be submitted to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 and shall be postmarked by the 30th day following the end of the reporting period. [§60.48c(j)]
8. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.
9. All records shall be maintained for five years.
10. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 006

10 CSR 10-6.070 New Source Performance Regulations

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

Emission Source	Description
T825	30,000 gallon Waste Methanol or Spent Mother Liquor Tank

Standards for VOC:

1. The permittee shall equip the storage vessel with: [§60.112b(a)]
 - a) A closed vent system and control device meeting the following specifications: [§60.112b(a)(3)]
 - 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 §60.485(b). [§60.112b(a)(3)(i)]
 - ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. [§60.112b(a)(3)(ii)]

Testing and Procedures:

1. The permittee shall meet the requirements of §60.113(c). [§60.113b]
2. The permittee is exempt from §60.8 of the General Provisions and shall meet the following requirements: [§60.113b(c)]
 - a) Submit for approval by the Director 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 following information: [§60.113b(c)(1)]
 - 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 NSPS Kb, 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. [§60.113b(c)(1)(i)]
 - 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). [§60.113b(c)(1)(ii)]
 - b) 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 Director in accordance with §60.113b(c)(1), unless the plan was modified by the Director during the review process. In this case, the modified plan applies. [§60.113b(c)(2)]

Reporting and Recordkeeping:

1. The permittee shall keep copies of the record required by §60.116(b) for the life of the source. [§60.116(a)]
2. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [§60.116(b)]
3. Except as provided in §60.116(f) and (g), the permittee 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. [§60.116(c)]
4. Except as provided in §60.116(g), the permittee shall notify the Director within 30 days when the maximum true vapor pressure of the liquid exceeds 27.6 kPa. [§60.116(d)]
5. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. [§60.116(e)]
 - a) 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. [§60.116(e)(1)]
 - b) The vapor pressure: [§60.116(e)(3)]
 - i) May be obtained from standard reference texts, or [§60.116(e)(3)(i)]
 - ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17); or [§60.116(e)(3)(ii)]
 - iii) Measured by an appropriate method approved by the Director; or [§60.116(e)(3)(iii)]
 - iv) Calculated by an appropriate method approved by the Director. [§60.116(e)(3)(iv)]
6. Each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements. [§60.116(f)]
 - a) 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 §60.116(e). [§60.116(f)(1)]
 - b) 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 six months thereafter is required as determined by the following methods: [§60.116(f)(2)]
 - i) ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17); or [§60.116(f)(2)(i)]
 - ii) ASTM D323-82 or 94 (incorporated by reference—see §60.17); or [§60.116(f)(2)(ii)]
 - iii) As measured by an appropriate method as approved by the Director. [§60.116(f)(2)(iii)]
7. 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 §65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of §60.116(c) and (d). [§60.116(g)]
8. The permittee shall keep records and furnish reports as required by §60.115b(c). The record required by §60.115b(c)(1) will be kept for the life of the control equipment. [§60.115b]
 - a) After installing control equipment in accordance with §60.112b(a)(3), the permittee shall keep the following records: [§60.115b(c)]
 - i) A copy of the operating plan. [§60.115b(c)(1)]
 - ii) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2). [§60.115b(c)(2)]
9. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.

- 10. All records shall be maintained for five years.
- 11. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 007	
10 CSR 10-6.075 Maximum Achievable Control Technology Regulations 40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	
Emission Source	Description
1231	244 HP Diesel Fire Water Pump, 0.62 MMBtu/hr

Emission Limitations and Other Requirements:

For 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, the permittee shall comply with the emission limitations in Table 2c to MACT ZZZZ which apply. [§63.6602]

Table 2c to MACT ZZZZ – Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions

For each...	The permittee shall meet the following requirement, except during periods of startup ...	During periods of startup the permittee shall ...
1. Emergency stationary CI RICE ¹⁹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first. ²⁰ 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. ²¹	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. ¹⁸

¹⁹ 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 MACT ZZZZ, 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. The permittee shall 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.

²⁰ The permittee may utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of MACT ZZZZ.

²¹ The permittee may petition the Administrator pursuant to the requirements of §63.6(g) for alternative work practices.

Fuel Requirements:

If the 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 for the purpose specified in §63.6640(f)(4)(ii), the permittee shall use diesel fuel that meets the requirements in §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. [§63.6604(b)]

Monitoring, Installation, Operation, and Maintenance Requirements:

1. The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which shall 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: [§63.6625(e)]
2. The permittee shall install a non-resettable hour meter if one is not already installed. [§63.6625(f)]
3. The permittee shall 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 MACT ZZZZ apply. [§63.6625(h)]
4. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in Table 2c to MACT ZZZZ. The oil analysis shall be performed at the same frequency specified for changing the oil in Table 2c to MACT ZZZZ. The analysis program shall 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 permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within two 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 permittee shall change the oil within two business days or before commencing operation, whichever is later. The permittee shall 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 shall be part of the maintenance plan for the engine. [§63.6625(i)]

Continuous Compliance:

1. The permittee shall be in compliance with the emission limitations, operating limitations, and other requirements in MACT ZZZZ that apply at all times. [§63.6605(a)]
2. At all times the permittee shall 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 the permittee 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 Director 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. [§63.6605(b)]
3. The permittee shall demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Table 2c to MACT ZZZZ that apply according to methods specified in Table 6 to MACT ZZZZ. [§63.6640(a)]

4. The permittee shall report each instance in which the permittee did not meet each emission limitation or operating limitation in Table 2c to MACT ZZZZ that apply. These instances are deviations from the emission and operating limitations in MACT ZZZZ. These deviations shall be reported according to the requirements in §63.6650. [§63.6640(b)]
5. The permittee shall also report each instance in which the permittee did not meet the requirements in Table 8 to MACT ZZZZ that apply. [§63.6640(e)]
6. The permittee shall operate the emergency stationary RICE according to the requirements in §63.6640(f)(1) through (3). In order for the engine to be considered an emergency stationary RICE under MACT ZZZZ, 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 §63.6640(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in §63.6640(f)(1) through (3), the engine will not be considered an emergency engine under MACT ZZZZ and shall meet all requirements for non-emergency engines. [§63.6640(f)]
 - a) There is no time limit on the use of emergency stationary RICE in emergency situations. [§63.6640(f)(1)]
 - b) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in §63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §63.6640(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph. [§63.6640(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 permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [§63.6640(f)(2)(i)]
 - 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 §63.6640(f)(2). 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. [§63.6640(f)(3)]

Table 6 to MACT ZZZZ – Continuous Compliance with Emission Limitations and Other Requirements

For each ...	Complying with the requirement to ...	The permittee shall demonstrate continuous compliance by ...
9. Existing emergency stationary RICE ≤500 HP located at a major source of HAP	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 a maintenance plan which shall 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.

Recordkeeping:

1. The permittee shall keep the following records: [§63.6655(a)]
 - a) A copy of each report that the permittee submitted to comply with MACT ZZZZ. [§63.6655(a)(1)]
 - b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [§63.6655(a)(2)]
 - c) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii). [§63.6655(a)(3)]
 - d) Records of all required maintenance performed on the air pollution control and monitoring equipment. [§63.6655(a)(4)]
 - e) 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. [§63.6655(a)(5)]
2. The permittee shall keep the records required in Table 6 of MACT ZZZZ to show continuous compliance with each emission or operating limitation that applies. [§63.6655(d)]
3. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. [§63.6655(e)]
4. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall 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. [§63.6655(f)]
5. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.
6. All records shall be maintained for five years.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 008	
10 CSR 10-6.075 Maximum Achievable Control Technology Regulations	
40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	
Emission Source	Description
G003	900 HP Diesel Emergency Generator, 2.29 MMBtu/hr

Conditional Exemption:

1. This existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is not required per §63.6590(b)(3)(iii) to comply with the requirements of MACT ZZZZ or MACT A provided the engine meets the definition of emergency at §63.6675.
 - a) *Emergency stationary RICE* means any stationary reciprocating internal combustion engine that meets all of the criteria in (i) through (iii) of this definition. All emergency stationary RICE shall 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 MACT ZZZZ. [§63.6675]

- i) 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.
- ii) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).
- b) The permittee shall operate the emergency stationary RICE according to the requirements in §63.6640(f)(1) through (3). In order for the engine to be considered an emergency stationary RICE under MACT ZZZZ, 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 §63.6640(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in §63.6640(f)(1) through (3), the engine will not be considered an emergency engine under MACT ZZZZ and shall meet all requirements for non-emergency engines. [§63.6640(f)]
 - i) There is no time limit on the use of emergency stationary RICE in emergency situations. [§63.6640(f)(1)]
 - ii) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in §63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §63.6640(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph. [§63.6640(f)(2)]
 - (1) 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 permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [§63.6640(f)(2)(i)]
 - iii) 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 §63.6640(f)(2). 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. [§63.6640(f)(3)]

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

PERMIT CONDITION 009	
10 CSR 10-6.075 Maximum Achievable Control Technology Regulations 40 CFR Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	
Emission Source	Description
Boiler	(1) 16.3 MMBtu/hr Boiler – natural gas with fuel oil #2 backup

Emission Limitations and Work Practice Standards:

1. This boiler meets the definition of *unit designed to burn gas 1 subcategory* at §63.7575:
 - a) *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.
2. The permittee shall meet the requirements in §63.7500(a)(1) through (3), except as provided in §63.7500(b) through (e). The permittee shall meet these requirements at all times the affected unit is operating, except as provided in §63.7500(f). [§63.7500(a)]
 - a) The permittee shall meet each work practice standard in Table 3 to MACT DDDDD that applies, for each boiler, except as provided under §63.7522. [§63.7500(a)(1)]
 - b) At all times, the permittee shall 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 Director 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. [§63.7500(a)(3)]
3. As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in §63.7500. [§63.7500(b)]
4. Boilers 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 MACT DDDDD, or the operating limits in Table 4 to MACT DDDDD. [§63.7500(e)]

Table 3 to MACT DDDDD – Work Practice Standards

For each...	The permittee shall meet the following . . .
3. An existing boiler 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 annually as specified in §63.7540. Units in either the Gas 1 subcategory will conduct this tune-up as a work practice for all regulated emissions under MACT DDDDD.

<p>4. An existing boiler located at a major source facility, not including limited use units</p>	<p>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 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 included the affected units also satisfies the energy assessment requirement. The energy assessment shall include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:</p> <ul style="list-style-type: none">a. A visual inspection of the boiler or process heater system.b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.f. A list of cost-effective energy conservation measures that are within the facility's control.g. A list of the energy savings potential of the energy conservation measures identified.h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
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General Compliance Requirements:

The permittee shall be in compliance with the work practice standards in MACT DDDDD. [§63.7505(a)]

Continuous Compliance Requirements:

1. The permittee shall conduct an annual performance tune-up according to §63.7540(a)(10). Each annual tune-up specified in §63.7540(a)(10) shall be no more than 13 months after the previous tune-up. [§63.7515(d)]
2. The permittee shall demonstrate continuous compliance with the work practice standards in Table 3 to MACT DDDDD that apply according to the methods specified in §63.7540(a)(10). [§63.7540(a)]
 - a) The permittee shall conduct an annual tune-up of the boiler to demonstrate continuous compliance as specified in §63.7540(a)(10)(i) through (vi). The permittee shall conduct the tune-up while burning the type of fuel that provide the majority of the heat input to the boiler over the 12 months prior to the tune-up. [§63.7540(a)(10)]

- i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee 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; [§63.7540(a)(10)(i)]
 - 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; [§63.7540(a)(10)(ii)]
 - iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee 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; [§63.7540(a)(10)(iii)]
 - 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; [§63.7540(a)(10)(iv)]
 - v) Measure the concentrations in the effluent stream of CO in ppmv 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 [§63.7540(a)(10)(v)]
 - vi) Maintain on-site and submit, if requested by the Director, a report containing the information in §63.7540(a)(10)(vi)(A) through (C), [§63.7540(a)(10)(vi)]
 - (1) The concentrations of CO in the effluent stream in ppmv, 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; [§63.7540(a)(10)(vi)(A)]
 - (2) A description of any corrective actions taken as a part of the tune-up; and [§63.7540(a)(10)(vi)(B)]
 - (3) 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. [§63.7540(a)(10)(vi)(C)]
- b) If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 calendar days of startup. [§63.7540(a)(13)]

Notifications, Reporting, and Recordkeeping:

1. The permittee shall submit to the Director 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 by the dates specified. [§63.7545(a)]
2. The Notification of Compliance Status shall only contain the information specified in §63.7545(e)(1) and (8). [§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 MACT DDDDD, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by the permittee or the EPA through a petition process to be a non-waste under §241.3, whether the fuel(s) were a secondary material processed from

- discarded non-hazardous secondary materials within the meaning of §241.3, and justification for the selection of fuel(s) burned during the compliance demonstration. [§63.7545(e)(1)]
- b) In addition to the information required in §63.9(h)(2), the notification of compliance status shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [§63.7545(e)(8)]
- i) “This facility completed the required initial tune-up for all boilers covered by MACT DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).” [§63.7545(e)(8)(i)]
- ii) “This facility has had an energy assessment performed according to §63.7530(e).” [§63.7545(e)(8)(ii)]
- 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 §129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.” [§63.7545(e)(8)(iii)]
3. If the permittee intends to use a fuel other than natural gas during a period of natural gas curtailment or supply interruption, as defined in §63.7575, the permittee shall 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 shall include the information specified in §63.7545(f)(1) through (5). [§63.7545(f)]
- a) Company name and address. [§63.7545(f)(1)]
- b) Identification of the affected unit. [§63.7545(f)(2)]
- c) Reason the permittee is 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. [§63.7545(f)(3)]
- d) Type of alternative fuel that the permittee intends to use. [§63.7545(f)(4)]
- e) Dates when the alternative fuel use is expected to begin and end. [§63.7545(f)(5)]
4. If the permittee switched fuels or made a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, the permittee shall provide notice of the date upon which the permittee switched fuels or made the physical change within 30 days of the switch/change. The notification shall identify: [§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) that have switched fuels, were physically changed, and the date of the notice. [§63.7545(h)(1)]
- b) The currently applicable subcategory under MACT DDDDD. [§63.7545(h)(2)]
- c) The date upon which the fuel switch or physical change occurred. [§63.7545(h)(3)]
5. The permittee shall submit each report in Table 9 to MACT DDDDD that applies. [§63.7550(a)]
6. Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), the permittee shall submit each report, according to §63.7550(h), by the date in Table 9 to MACT DDDDD and according to the requirements in §63.7550(b)(1) through (4). For units that are subject only to a requirement to conduct an annual tune-up according to §63.7540(a)(10) and not subject to emission limits or operating limits, the permittee may submit only an annual compliance report, as specified in §63.7550(b)(1) through (4), instead of a semi-annual compliance report. [§63.7550(b)]
- a) Annual compliance reports shall cover the applicable one-year period from January 1 to December 31. [§63.7550(b)(3)]
- b) Annual compliance reports shall be postmarked or submitted no later than January 31. [§63.7550(b)(4)]

7. A compliance report shall contain the following information depending on how the facility chooses to comply with the limits set in MACT DDDDD. [§63.7550(c)]
 - a) The permittee shall submit a compliance report with the information in §63.7550(c)(5)(i) through (iii), (xiv), and (xvii). [§63.7550(c)(1)]
 - i) Company and Facility name and address. [§63.7550(c)(5)(i)]
 - ii) Process unit information, emissions limitations, and operating parameter limitations. [§63.7550(c)(5)(ii)]
 - iii) Date of report and beginning and ending dates of the reporting period. [§63.7550(c)(5)(iii)]
 - iv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to §63.7540(a)(10). Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown. [§63.7550(c)(5)(xiv)]
 - v) 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. [§63.7550(c)(5)(xvii)]
8. The permittee shall submit the reports according to the procedures specified in §63.7550(h)(3). [§63.7550(h)]
 - a) The permittee shall submit all reports required by Table 9 of MACT DDDDD electronically to the EPA using CEDRI. (CEDRI can be accessed through the EPA's CDX). The permittee shall use the appropriate electronic report in CEDRI for MACT DDDDD. Instead of using the electronic report in CEDRI for MACT DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed in CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to MACT DDDDD is not available in CEDRI at the time that the report is due, the permittee shall submit the report to the Administrator at the appropriate address listed in §63.13. The permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [§63.7550(h)(3)]
9. The permittee shall keep records according to §63.7555(a)(1) and (2). [§63.7555(a)]
 - a) A copy of each notification and report that the permittee submitted to comply with MACT DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or annual compliance report that the permittee submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]
 - b) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii). [§63.7555(a)(2)]
10. If the permittee uses an alternative fuel other than natural gas, the permittee shall 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. [§63.7555(h)]
11. Records shall be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). [§63.7560(a)]
12. As specified in §63.10(b)(1), the permittee shall keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [§63.7560(b)]
13. The permittee shall keep each record on site, or they shall be accessible from on site (for example, through a computer network), for at least two years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). The permittee may keep the records off site for the remaining three years. [§63.7560(c)]
14. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

Table 9 to MACT DDDDD – Reporting Requirements

The permittee shall submit a ...	The report shall contain ...	The permittee shall submit the report ...
1. Compliance report	a. Information required in §63.7550(c)(1) through (5)	Annually according to the requirements in §63.7550(b).

PERMIT CONDITION 010

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
 40 CFR Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Emission Source	Description
Boilers	(2) 8.4 MMBtu/hr Boilers – natural gas and/or fuel oil #2

Emission Limitations and Work Practice Standards:

1. This boiler meets the definition of *unit designed to burn gas 1 subcategory* at §63.7575:
 - a) *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.
2. The permittee shall meet the requirements in §63.7500(a)(1) through (3), except as provided in §63.7500(b) through (e). The permittee shall meet these requirements at all times the affected unit is operating, except as provided in §63.7500(f). [§63.7500(a)]
 - a) The permittee shall meet each work practice standard in Table 3 to MACT DDDDD that applies, except as provided under §63.7522. [§63.7500(a)(1)]
 - b) At all times, the permittee shall 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 Director 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. [§63.7500(a)(3)]
3. As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in §63.7500. [§63.7500(b)]
4. Boilers in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 MMBtu/hr and less than 10 MMBtu/hr shall complete a tune-up every two years as specified in §63.7540. Boilers 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 MACT DDDDD, or the operating limits in Table 4 to MACT DDDDD. [§63.7500(e)]

Table 3 to MACT DDDDD – Work Practice Standards

For each...	The permittee shall meet the following . . .
2. An existing boiler with heat input capacity of less than 10 MMBtu/hr, but greater than 5 MMBtu/hr, 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 biennially as specified in §63.7540.

4. An existing boiler located at a major source facility, not including limited use units	<p>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 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 included the affected units also satisfies the energy assessment requirement. The energy assessment shall include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:</p> <ul style="list-style-type: none">a. A visual inspection of the boiler or process heater system.b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.f. A list of cost-effective energy conservation measures that are within the facility's control.g. A list of the energy savings potential of the energy conservation measures identified.h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
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General Compliance Requirements

The permittee shall be in compliance with the work practice standards in MACT DDDDD.
[§63.7505(a)]

Continuous Compliance Requirements:

1. The permittee shall conduct a biennial performance tune-up according to §63.7540(a)(11). Each biennial tune-up specified in §63.7540(a)(11) shall be conducted no more than 25 months after the previous tune-up. [§63.7515(d)]

2. The permittee shall demonstrate continuous compliance with the work practice standards in Table 3 to MACT DDDDD that apply according to the methods specified in §63.7540(a)(10)(i) through (vi) and (a)(11). [§63.7540(a)]
 - a) The permittee shall conduct a biennial tune-up of the boiler as specified in §63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. [§63.7540(a)(11)]
 - i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee 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; [§63.7540(a)(10)(i)]
 - 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; [§63.7540(a)(10)(ii)]
 - iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee 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; [§63.7540(a)(10)(iii)]
 - 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; [§63.7540(a)(10)(iv)]
 - v) Measure the concentrations in the effluent stream of CO in ppmv 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 [§63.7540(a)(10)(v)]
 - vi) Maintain on-site and submit, if requested by the Director, a report containing the information in §63.7540(a)(10)(vi)(A) through (C), [§63.7540(a)(10)(vi)]
 - (1) The concentrations of CO in the effluent stream in ppmv 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; [§63.7540(a)(10)(vi)(A)]
 - (2) A description of any corrective actions taken as a part of the tune-up; and [§63.7540(a)(10)(vi)(B)]
 - (3) 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. [§63.7540(a)(10)(vi)(C)]
 - b) If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 calendar days of startup. [§63.7540(a)(13)]

Notifications, Reporting, and Recordkeeping:

1. The permittee shall submit to the Director 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 by the dates specified. [§63.7545(a)]
2. The Notification of Compliance Status must only contain the information specified in §63.7545(e)(1) and (8). [§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 this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by the permittee or the EPA through a petition process to be a non-waste under §241.3, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of §241.3, and justification for the selection of fuel(s) burned during the compliance demonstration. [§63.7545(e)(1)]
- b) In addition to the information required in §63.9(h)(2), the notification of compliance status shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [§63.7545(e)(8)]
 - i) “This facility completed the required initial tune-up for all boilers covered by MACT DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).” [§63.7545(e)(8)(i)]
 - ii) “This facility has had an energy assessment performed according to §63.7530(e).” [§63.7545(e)(8)(ii)]
 - 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 §129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.” [§63.7545(e)(8)(iii)]
3. If the permittee intends to use a fuel other than natural gas during a period of natural gas curtailment or supply interruption, as defined in §63.7575, the permittee shall 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 shall include the information specified in §63.7545(f)(1) through (5). [§63.7545(f)]
 - a) Company name and address. [§63.7545(f)(1)]
 - b) Identification of the affected unit. [§63.7545(f)(2)]
 - c) Reason the permittee is 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. [§63.7545(f)(3)]
 - d) Type of alternative fuel that you intend to use. [§63.7545(f)(4)]
 - e) Dates when the alternative fuel use is expected to begin and end. [§63.7545(f)(5)]
4. If the permittee switched fuels or made a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, the permittee shall provide notice of the date upon which the permittee switched fuels or made the physical change within 30 days of the switch/change. The notification shall identify: [§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. [§63.7545(h)(1)]
 - b) The currently applicable subcategory under MACT DDDDD. [§63.7545(h)(2)]
 - c) The date upon which the fuel switch or physical change occurred. [§63.7545(h)(3)]
5. The permittee shall submit each report in Table 9 to MACT DDDDD that applies. [§63.7550(a)]
6. Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), the permittee shall submit each report, according to §63.7550(h), by the date in Table 9 to MACT DDDDD and according to the requirements in §63.7550(b)(1) through (4). For units that are subject only to a requirement to conduct a biennial tune-up according to §63.7540(a)(11) and not subject to emission limits or operating limits, the permittee may submit only a biennial compliance

- report, as applicable, as specified in §63.7550(b)(1) through (4), instead of a semi-annual compliance report. [§63.7550(b)]
- a) Biennial compliance reports shall cover the applicable two-year period from January 1 to December 31. [§63.7550(b)(3)]
 - b) Biennial compliance reports shall be postmarked or submitted no later than January 31. [§63.7550(b)(4)]
7. A compliance report shall contain the following information depending on how the facility chooses to comply with the limits set in MACT DDDDD. [§63.7550(c)]
- a) The permittee shall submit a compliance report with the information in §63.7550(c)(5)(i) through (iii), (xiv), and (xvii). [§63.7550(c)(1)]
 - i) Company and Facility name and address. [§63.7550(c)(5)(i)]
 - ii) Process unit information, emissions limitations, and operating parameter limitations. [§63.7550(c)(5)(ii)]
 - iii) Date of report and beginning and ending dates of the reporting period. [§63.7550(c)(5)(iii)]
 - iv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct a biennial tune-up according to §63.7540(a)(11). Include the date of the most recent burner inspection if it was not done biennially and was delayed until the next scheduled or unscheduled unit shutdown. [§63.7550(c)(5)(xiv)]
 - v) 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. [§63.7550(c)(5)(xvii)]
8. The permittee shall submit the reports according to the procedures specified in §63.7550(h)(3). [§63.7550(h)]
- a) The permittee shall submit all reports required by Table 9 of MACT DDDDD electronically to the EPA using CEDRI. (CEDRI can be accessed through the EPA's CDX). The permittee shall use the appropriate electronic report in CEDRI for MACT DDDDD. Instead of using the electronic report in CEDRI for MACT DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed in CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to MACT DDDDD is not available in CEDRI at the time that the report is due, the permittee shall submit the report to the Administrator at the appropriate address listed in §63.13. The permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [§63.7550(h)(3)]
9. The permittee shall keep records according to §63.7555(a)(1) and (2). [§63.7555(a)]
- a) A copy of each notification and report that the permittee submitted to comply with MACT DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or annual compliance report that the permittee submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]
 - b) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii). [§63.7555(a)(2)]
10. If the permittee uses an alternative fuel other than natural gas, the permittee shall 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. [§63.7555(h)]
11. Records shall be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). [§63.7560(a)]
12. As specified in §63.10(b)(1), the permittee shall keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [§63.7560(b)]

13. The permittee shall keep each record on site, or they shall be accessible from on site (for example, through a computer network), for at least two years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). The permittee may keep the records off site for the remaining three years. [§63.7560(c)]
14. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit.

Table 9 to MACT DDDDD – Reporting Requirements

The permittee shall submit a ...	The report shall contain ...	The permittee shall submit the report ...
1. Compliance report	a. Information required in §63.7550(c)(1) through (5); and	Biennially according to the requirements in §63.7550(b).

PERMIT CONDITION 011	
10 CSR 10-6.261 Control of Sulfur Dioxide Emissions ²²	
Emission Source	Description
Boilers	(2) 8.4 MMBtu/hr Boilers – natural gas and/or fuel oil #2

Emission Limitation:

The permittee shall limit SO₂ to no more than 8 lb/MMBtu heat input averaged on a consecutive three-hour time period. [10 CSR 10-6.261(3)(B)1]

Operational Limitation:

The permittee shall not combust fuel oil that contains greater than 0.5 weight percent sulfur²³.

Compliance Methods:

1. The permittee shall demonstrate compliance using: [10 CSR 10-6.261(3)(E)3]
 - a) Fuel delivery records; or
 - b) Fuel sampling and analysis.

Reporting and Recordkeeping:

1. The permittee shall report any excess emissions other than startup, shutdown, and malfunction excess emissions already required to be reported under 10 CSR 10-6.050 to the Director for each calendar quarter within 30 days following the end of the quarter. In all cases, the notification shall be a written report and shall include, at a minimum, the following: [10 CSR 10-6.261(4)(A)1]

²² This regulation has not yet been adopted into Missouri’s SIP; therefore, this regulation is a state only requirement. Upon adoption into Missouri’s SIP this regulation will be both a state and federal requirement.

²³ The following calculations demonstrate how the operational limitation demonstrates compliance with the emission limitation:

Fuel	Emission Factor & Source	Heat Content & Source	Emission Rate (lb/MMBtu)
Natural Gas	0.6 lb/MMscf AP-42 Table 1.4-2	1,050 MMBtu/MMscf AP-42 Appendix A	0.0006
Fuel Oil #2	142S lb/1,000 gallons ²³ AP-42 Table 1.3-1	140 MMBtu/1,000 gallons AP-42 Appendix A	0.51

- a) Name and location of source;
 - b) Name and telephone number of person responsible for the source;
 - c) Identity and description of the equipment involved;
 - d) Time and duration of the period of SO₂ excess emissions;
 - e) Type of activity;
 - f) Estimate of the magnitude of the SO₂ excess emissions expressed in the units of the applicable emission control regulation and the operating data and calculations used in estimating the magnitude;
 - g) Measures taken to mitigate the extent and duration of the SO₂ excess emissions; and
 - h) Measures taken to remedy the situation which caused the SO₂ excess emissions and the measures taken or planned to prevent the recurrence of these situations;
2. The permittee shall maintain a list of modifications to the source's operating procedures or other routine procedures instituted to prevent or minimize the occurrence of any excess SO₂ emissions; [10 CSR 10-6.261(4)(A)2]
 3. The permittee shall maintain a record of data, calculations, results, records, and reports from any fuel deliveries, and/or fuel sampling tests. [10 CSR 10-6.261(4)(A)3]
 4. If using fuel delivery records to demonstrate compliance, the permittee shall also maintain the fuel supplier certification information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable: [10 CSR 10-6.261(4)(C)]
 - a) The name, address, and contact information of the fuel supplier;
 - b) The type of fuel (diesel, #2 fuel oil, etc.);
 - c) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and
 - d) The heating value of the fuel.
 5. If using fuel sampling and analysis to demonstrate compliance, the permittee shall also follow the requirements in 10 CSR 10-6.261(5)(D). [10 CSR 10-6.261(4)(D)]
 6. All required reports and records shall be retained on-site for a minimum of five years and made available within five business days upon written or electronic request by the Director. [10 CSR 10-6.261(4)(F)]
 7. The permittee shall furnish the Director all data necessary to determine compliance status. [10 CSR 10-6.261(4)(G)]
 8. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 012	
10 CSR 10-6.261 Control of Sulfur Dioxide Emissions ²⁴	
Emission Source	Description
1231	244 HP Diesel Fire Water Pump, 0.62 MMBtu/hr
G003	900 HP Diesel Emergency Generator, 2.29 MMBtu/hr

²⁴ This regulation has not yet been adopted into Missouri's SIP; therefore, this regulation is a state only requirement. Upon adoption into Missouri's SIP this regulation will be both a state and federal requirement.

Operational Limitation:

The permittee shall limit the fuel sulfur content to 8,812 ppm. [10 CSR 10-6.261(3)(C)]

Compliance Methods:

1. The permittee shall demonstrate compliance using: [10 CSR 10-6.261(3)(E)3]
 - a) Fuel delivery records; or
 - b) Fuel sampling and analysis.

Reporting and Recordkeeping:

1. The permittee shall report any excess emissions other than startup, shutdown, and malfunction excess emissions already required to be reported under 10 CSR 10-6.050 to the Director for each calendar quarter within 30 days following the end of the quarter. In all cases, the notification shall be a written report and shall include, at a minimum, the following: [10 CSR 10-6.261(4)(A)1]
 - a) Name and location of source;
 - b) Name and telephone number of person responsible for the source;
 - c) Identity and description of the equipment involved;
 - d) Time and duration of the period of SO₂ excess emissions;
 - e) Type of activity;
 - f) Estimate of the magnitude of the SO₂ excess emissions expressed in the units of the applicable emission control regulation and the operating data and calculations used in estimating the magnitude;
 - g) Measures taken to mitigate the extent and duration of the SO₂ excess emissions; and
 - h) Measures taken to remedy the situation which caused the SO₂ excess emissions and the measures taken or planned to prevent the recurrence of these situations;
2. The permittee shall maintain a list of modifications to the source's operating procedures or other routine procedures instituted to prevent or minimize the occurrence of any excess SO₂ emissions; [10 CSR 10-6.261(4)(A)2]
3. The permittee shall maintain a record of data, calculations, results, records, and reports from any fuel deliveries, and/or fuel sampling tests. [10 CSR 10-6.261(4)(A)3]
4. If using fuel delivery records to demonstrate compliance, the permittee shall also maintain the fuel supplier certification information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable: [10 CSR 10-6.261(4)(C)]
 - a) The name, address, and contact information of the fuel supplier;
 - b) The type of fuel (diesel, #2 fuel oil, etc.);
 - c) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and
 - d) The heating value of the fuel.
5. If using fuel sampling and analysis to demonstrate compliance, the permittee shall also follow the requirements in 10 CSR 10-6.261(5)(D). [10 CSR 10-6.261(4)(D)]
6. All required reports and records shall be retained on-site for a minimum of five years and made available within five business days upon written or electronic request by the Director. [10 CSR 10-6.261(4)(F)]
7. The permittee shall furnish the Director all data necessary to determine compliance status. [10 CSR 10-6.261(4)(G)]

8. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.
 [§70.6(a)(3)(iii)]

PERMIT CONDITION 013	
10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds ²⁵	
Emission Source	Description
Boilers	(2) 8.4 MMBtu/hr Boilers – natural gas and/or fuel oil #2

Emission Limitation:

The permittee shall limit SO₂ to no more than 8 lb/MMBtu heat input averaged on a consecutive three-hour time period. [10 CSR 10-6.260(3)(B)2.A]

Operational Limitation:

The permittee shall not combust fuel oil that contains greater than 0.5 weight percent sulfur²⁶.

Compliance Methods:

1. The permittee shall demonstrate compliance using:
 - a) Fuel delivery records; or
 - b) Fuel sampling and analysis.

Reporting and Recordkeeping:

1. The permittee shall maintain a record of data, calculations, results, records, and reports from any fuel deliveries, and/or fuel sampling tests.
2. If using fuel delivery records to demonstrate compliance, the permittee shall also maintain the fuel supplier certification information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable:
 - a) The name, address, and contact information of the fuel supplier;
 - b) The type of fuel (diesel, #2 fuel oil, etc.);

²⁵ This regulation was rescinded by the State of Missouri on November 30, 2015. The regulation remains in this operating permit as it is contained in Missouri’s SIP and remains an applicable federal requirement. This regulation is federally enforceable only. This permit condition will no longer be applicable when EPA takes final action to incorporate 10 CSR 10-6.261 in Missouri’s SIP in place of 10 CSR 10-6.260. No action is required on the part of the permittee to remove this permit condition from this operating permit upon incorporation of 10 CSR 10-6.261 into Missouri’s SIP.

²⁶ The following calculations demonstrate how the operational limitation demonstrates compliance with the emission limitation:

Fuel	Emission Factor & Source	Heat Content & Source	Emission Rate (lb/MMBtu)
Natural Gas	0.6 lb/MMscf AP-42 Table 1.4-2	1,050 MMBtu/MMscf AP-42 Appendix A	0.0006
Fuel Oil #2	142S lb/1,000 gallons ²⁶ AP-42 Table 1.3-1	140 MMBtu/1,000 gallons AP-42 Appendix A	0.51

- c) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and
 - d) The heating value of the fuel.
 - 3. If using fuel sampling and analysis to demonstrate compliance, the permittee shall also follow the requirements in 10 CSR 10-6.261(5)(D).
 - 4. All required reports and records shall be retained on-site for a minimum of five years and made available within five business days upon written or electronic request by the Director.
 - 5. The permittee shall furnish the Director all data necessary to determine compliance status.
 - 6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.
- [§70.6(a)(3)(iii)]

PERMIT CONDITION 014	
10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds ²⁷	
Emission Source	Description
1231	244 HP Diesel Fire Water Pump, 0.62 MMBtu/hr
G003	900 HP Diesel Emergency Generator, 2.29 MMBtu/hr

Emission Limitations:

The permittee shall not cause or permit the emission into the atmosphere of gases containing more than 500 ppmv of SO₂ or more than 35 mg/m³ of H₂SO₄ or SO₃ or any combination of these gases averaged on any consecutive three-hour time period. [10 CSR 10-6.260(3)(A)2]

Operational Limitation:

These emergency engines shall only burn fuel oils #1 and #2 containing less than 8,480 ppm sulfur by weight²⁸.

Compliance Methods:

- 1. The permittee shall demonstrate compliance using:
 - a) Fuel delivery records; or
 - b) Fuel sampling and analysis.

²⁷ This regulation was rescinded by the State of Missouri on November 30, 2015. The regulation remains in this operating permit as it is contained in Missouri’s SIP and remains an applicable federal requirement. This regulation is federally enforceable only. This permit condition will no longer be applicable when EPA takes final action to incorporate 10 CSR 10-6.261 in Missouri’s SIP in place of 10 CSR 10-6.260. No action is required on the part of the permittee to remove this permit condition from this operating permit upon incorporation of 10 CSR 10-6.261 into Missouri’s SIP.

²⁸ G003: The permittee is in compliance with the emission limitation as AP-42 Table 3.4-1 (October 1996) indicates that engines of greater than 600 hp emit 1.01S lb/MMBtu SO_x, where S is the sulfur content (%). Using an F factor of 10,320 wscf/MMBtu from NSPS Appendix A Method 19 Table 19-1, a conversion factor of 1.660E-7 lb/scf per ppmv from NSPS Appendix A Method 19, and the sulfur content limit of 8,480 ppm, 1.01S lb/MMBtu SO_x converts to 500 ppmv SO₂.

1231: The permittee is in compliance with the emission limitation as AP-42 Table 3.3-1 (October 1996) indicates that engines of less than 600 hp emit 0.29 lb/MMBtu SO_x. Using an F factor of 10,320 wscf/MMBtu from NSPS Appendix A Method 19 Table 19-1 and a conversion factor of 1.660E-7 lb/scf per ppmv from NSPS Appendix A Method 19, 0.29 lb/MMBtu SO_x converts to 169 ppmv SO₂.

Reporting and Recordkeeping:

1. The permittee shall maintain a record of data, calculations, results, records, and reports from any fuel deliveries, and/or fuel sampling tests.
2. If using fuel delivery records to demonstrate compliance, the permittee shall also maintain the fuel supplier certification information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable:
 - a) The name, address, and contact information of the fuel supplier;
 - b) The type of fuel (diesel, #2 fuel oil, etc.);
 - c) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and
 - d) The heating value of the fuel.
3. If using fuel sampling and analysis to demonstrate compliance, the permittee shall also follow the requirements in 10 CSR 10-6.261(5)(D).
4. All required reports and records shall be retained on-site for a minimum of five years and made available within five business days upon written or electronic request by the Director.
5. The permittee shall furnish the Director all data necessary to determine compliance status.
6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and compliance certification required by Section V of this permit.
[§70.6(a)(3)(iii)]

IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the CFR, the CSR, and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

10 CSR 10-6.045 Open Burning Requirements

1. General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
2. Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the permittee fails to comply with the conditions or any provisions of the permit.

10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

1. In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
 - a) Name and location of installation;
 - b) Name and telephone number of person responsible for the installation;
 - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - d) Identity of the equipment causing the excess emissions;
 - e) Time and duration of the period of excess emissions;
 - f) Cause of the excess emissions;
 - g) Air pollutants involved;
 - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
2. The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
3. Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under §643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess

emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under §§643.080 or 643.151, RSMo.

4. Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under §§643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
5. Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than 18 months. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources' personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61, Subpart M – National Emission Standard for Asbestos

1. The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
2. The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information

1. The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on EIQ paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
2. The permittee may be required by the director to file additional reports.
3. Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
4. The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
5. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
6. The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director.

The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.

7. The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the 12-month period immediately preceding the end of the reporting period.
8. The permittee shall collect, record, and maintain the information necessary to complete the required forms during each year of operation of the installation.

10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150 Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.165 Restriction of Emission of Odors

This requirement is not federally enforceable.

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

10 CSR 10-6.170 Restriction of PM to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

1. The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive PM emissions to go beyond the premises of origin in quantities that the PM may be found on surfaces beyond the property line of origin. The nature or origin of the PM shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
2. The permittee shall not cause nor allow any fugitive PM emissions to remain visible in the ambient air beyond the property line of origin.
3. Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
 - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
 - b) Paving or frequent cleaning of roads, driveways and parking lots;
 - c) Application of dust-free surfaces;
 - d) Application of water; and
 - e) Planting and maintenance of vegetative ground cover.

Monitoring:

1. The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. If the permittee discovers a violation, the permittee shall undertake corrective action to eliminate the violation.
2. The permittee shall maintain the following monitoring schedule:
 - a) The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance.
 - b) Should no violation of this regulation be observed during this period then-
 - i) The permittee may observe once every two weeks for a period of eight weeks.
 - ii) If a violation is noted, monitoring reverts to weekly.
 - iii) Should no violation of this regulation be observed during this period then-
 - (1) The permittee may observe once per month.
 - (2) If a violation is noted, monitoring reverts to weekly.
 - c) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

Recordkeeping:

1. The permittee shall document all readings on Attachment B, or its equivalent, noting the following:
 - a) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
 - b) Whether equipment malfunctions contributed to an exceedance.
 - c) Any violations and any corrective actions undertaken to correct the violation.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

1. The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
2. The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
3. The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain

accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

10 CSR 10-6.280 Compliance Monitoring Usage

1. The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Any other monitoring methods approved by the director.
2. Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
 - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
3. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a) Applicable monitoring or testing methods, cited in:
 - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
 - ii) 10 CSR 10-6.040, "Reference Methods";
 - iii) 10 CSR 10-6.070, "New Source Performance Standards";
 - iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
 - b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a) All containers in which a class I or class II substance is 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 into 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 statement 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.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in 40 CFR Part 82, Subpart B:
 - 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 the 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.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A - Production and Consumption Controls.
 4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B - Servicing of MVACs. The term "motor vehicle" as used in 40 CFR Part 82, Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in 40 CFR Part 82, Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
 5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

10 CSR 10-6.065(6)(C)1.B Permit Duration

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

10 CSR 10-6.065(6)(C)1.C General Recordkeeping and Reporting Requirements

1. Recordkeeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
2. Reporting
 - a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
 - b) The permittee shall submit a report of all required monitoring by:
 - i) October 1st for monitoring which covers the January through June time period, and
 - ii) April 1st for monitoring which covers the July through December time period.
 - iii) Exception. Monitoring requirements which require reporting more frequently than semi-annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or 40 CFR Part 64 exceedances.
 - d) Submit supplemental reports as required or as needed. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in 10 CSR 10-6.065(6)(C)7.A shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
 - iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in this permit, and

no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.

- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

10 CSR 10-6.065(6)(C)1.D Risk Management Plan §Section 112(r)

1. The permittee shall comply with the requirements of 40 CFR Part 68 - Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by §68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:
 - a) June 21, 1999;
 - b) Three years after the date on which a regulated substance is first listed under §68.130; or
 - c) The date on which a regulated substance is first present above a threshold quantity in a process.

10 CSR 10-6.065(6)(C)1.F Severability Clause

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements

1. The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
2. The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
3. The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
4. This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
5. The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios

None.

10 CSR 10-6.065(6)(C)3 Compliance Requirements

1. Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
2. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - a) Enter upon the premises where a permitted installation is located or an 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 that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times and using reasonable safety practices, 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 Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
3. All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
4. The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and 40 CFR Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
 - a) The identification of each term or condition of the permit that is the basis of the certification;
 - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
 - c) Whether compliance was continuous or intermittent;
 - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and

- e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield

1. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
 - a) The applicable requirements are included and specifically identified in this permit, or
 - b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
2. Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
 - a) The provisions of §303 of the Act or §643.090, RSMo concerning emergency orders,
 - b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
 - c) The applicable requirements of the acid rain program,
 - d) The authority of EPA and the Air Pollution Control Program to obtain information, or
 - e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(6)(C)7 Emergency Provisions

1. An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
 - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
 - b) That the installation was being operated properly,
 - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
 - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
2. Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(6)(C)8 Operational Flexibility

1. An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable

permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

2. §502(b)(10) changes. Changes that, under §502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.
 - a) Before making a change under this provision, the permittee shall provide advance written notice to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to EPA and the Air Pollution Control Program as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to EPA and the Air Pollution Control Program as soon as possible after learning of the need to make the change.
 - b) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

1. Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
 - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
 - b) The permittee shall provide contemporaneous written notice of the change to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3 of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
 - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
 - d) The permit shield shall not apply to these changes.

10 CSR 10-6.020(2)(R)34 Responsible Official

The application utilized in the preparation of this permit was signed by Carey Case, Plant Manager. On August 27, 2015, the Air Pollution Control Program was informed that Chad Dykes, Plant Manager, is now the responsible official. If this person terminates employment, or is reassigned different duties such

that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the permittee shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the permittee to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause

1. This permit may be reopened for cause if:
 - a) The Missouri Department of Natural Resources receives notice from EPA that a petition for disapproval of a permit pursuant to §70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
 - b) The Missouri Department of Natural Resources or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
 - c) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
 - i) The permit has a remaining term of less than three years;
 - ii) The effective date of the requirement is later than the date on which the permit is due to expire; or
 - iii) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
 - d) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
 - e) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis

This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments

Attachments follow. Attachment F contains a list of abbreviations and acronyms used throughout this permit.

Attachment D

Method 9 Opacity Emissions Observations								
Company				Observer				
Location				Observer Certification Date				
Date				Emission Unit				
Time				Control Device				
Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
SUMMARY OF AVERAGE OPACITY								
Set Number	Time				Opacity			
	Start	End		Sum	Average			

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation?
 YES NO Signature of Observer

ATTACHMENT F
Abbreviations and Acronyms

°Cdegrees Celsius	lb/hr pounds per hour
°F degrees Fahrenheit	MACT Maximum Achievable Control Technology
AAQIA ambient air quality impact analysis	µg/m³ micrograms per cubic meter
acfm actual cubic feet per minute	m/s meters per second
BACT Best Available Control Technology	mgmilligrams
BMPs Best Management Practices	Mgal 1,000 gallons
Btu British thermal unit	MW megawatt
CAM Compliance Assurance Monitoring	MHDR maximum hourly design rate
CAS Chemical Abstracts Service	MMBtu Million British thermal units
CDX Central Data Exchange	mmHgmillimeters mercury
CEDRI Compliance and Emissions Data Reporting Interface	MMscf Million standard cubic feet
CEMS Continuous Emission Monitor System	MSDS Material Safety Data Sheet
CFR Code of Federal Regulations	NAAQS National Ambient Air Quality Standards
CI compression ignition	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CO carbon monoxide	NO_x nitrogen oxides
CO₂ carbon dioxide	NSPS New Source Performance Standards
CO_{2e} carbon dioxide equivalent	NSR New Source Review
COMS Continuous Opacity Monitoring System	PM particulate matter
CSR Code of State Regulations	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
dscf dry standard cubic feet	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscmdry standard cubic meter	ppm parts per million
EIQ Emission Inventory Questionnaire	ppmv parts per million by volume
EP Emission Point	ppmw parts per million by weight
EPA Environmental Protection Agency	PSD Prevention of Significant Deterioration
EU Emission Unit	psipounds per square inch
FGD flue gas desulfurization	psia pounds per square inch atmosphere
FIREEPA's Factor Information Retrieval System	PTE potential to emit
fps feet per second	RACT Reasonable Available Control Technology
ft feet	RAL Risk Assessment Level
GACT Generally Available Control Technology	RICE reciprocating internal combustion engine
GHG Greenhouse Gas	RSMo Revised Statute of Missouri
gpm gallons per minute	SCC Source Classification Code
gr grains	scfm standard cubic feet per minute
GWP Global Warming Potential	SCR selective catalytic reduction
HAP Hazardous Air Pollutant	SIC Standard Industrial Classification
hr hour	SIP State Implementation Plan
HP horsepower	SMAL Screening Model Action Levels
kPa kilopascals	SO_x sulfur oxides
lb pound	

SO₂ sulfur dioxide

tph..... tons per hour

tpy..... tons per year

VMT vehicle miles traveled

VOC..... Volatile Organic Compound

yr..... year

STATEMENT OF BASIS

Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

1. Part 70 Operating Permit Application, received November 13, 2012
2. 2014, 2013, 2012, 2011, and 2010 Emissions Inventory Questionnaires
3. U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition
4. Construction Permits 0989-004, 1292-012, 0395-002, 0797-032, 0597-013, 0198-024, 0198-034, 1298-010, 0399-010, 102001-011, 092002-014, 022003-014, 082003-002, and 122009-011
5. 3/15/2004, 10/27/2005, 3/23/2006, 6/14/2006, 03/28/2008, and 12/12/2013 No Construction Permit Required Determinations

Other Air Regulations Determined Not to Apply to the Operating Permit

The Air Pollution Control Program has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-6.100 *Alternate Emission Limits* is not applicable to the installation as the installation is located in an ozone attainment area.

10 CSR 10-6.405 *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating* is not applicable to the installation. 10 CSR 10-6.405(1)(E) exempts installations which are fueled only by natural gas and fuel oil #2 with less than 1.2% sulfur.

Construction Permits

Construction Permit 0989-004, Issued September 25, 1989:

- ◆ This construction permit is for the initial construction of the installation consisting of production of 6-APA, Penicillin-G Sulfoxide, 7-ADCA, Dane Salt, Cephalexin Monohydrate, and Sodium Phenyl Acetate.
- ◆ The only product still being produced is Cephalexin Monohydrate. The production limit in this permit of 641 batches was increased by Construction Permit 102011-001.

Construction Permit 1292-012, Issued December 16, 1992:

- ◆ This construction permit allows increased production of Dane Salt.
- ◆ The installation no longer produces Dane Salt and the two 200 HP boilers have been removed; therefore, the conditions of this construction permit are no longer applicable.

Construction Permit 0395-002, Issued January 16, 1995:

- ◆ This Section (6) NSR Permit is for the installation of equipment to product Penicillin V K and to modify existing Pencillin G equipment to produce Penicillin V K.
- ◆ The installation no longer produces Penicillin V K; therefore, the conditions of this construction permit are no longer applicable.

Construction Permit 0797-032, Issued July 11, 1997:

- ◆ This Section (5) NSR Permit is for the installation of two reactors, a reactor by-product receiver vessel, a reactor solvent receiver vessel, and two solvent holding vessels in the Cephalosporin G 300 process; conversion of the existing methanol distillation process and column from methanol to toluene recovery; installation of a new methanol distillation column; and installation of two boilers.
- ◆ The conditions of this construction permit applied to the 300 process which is no longer in operation; therefore, the special conditions have not been included in this operating permit.

Construction Permit 0597-013, Issued November 14, 1996:

- ◆ This Section (5) NSR Permit is for the installation of SB-1 & SB-2 3 MMBtu/hr boilers for the wastewater treatment plant, T1201 5,040 gallon Fuel Oil Tank, T1202 & T1230 300 gallon Fuel Oil Tanks, T1401 1,000 gallon Fuel Oil Tank, TG003 500 gallon Fuel Oil Tanks, and the flexibility to store methanol, toluene, or isopropanol any of the tanks in the existing tank farm.
- ◆ This permit contains no special conditions.

Construction Permit 0198-024, Issued January 13, 1998:

- ◆ This Section (5) NSR Permit is for the installation of two reactors and a bulk storage tank for the production of bis-trimethylsilylurea.
- ◆ Special Condition 1 required one time testing to establish the VOC emission rate from the reactors. These reactors are no longer in operation.

Construction Permit 0198-034, Issued January 20, 1998:

- ◆ This Section (5) NSR Permit is for the installation of equipment to produce Amoxicillin trihydrate.
- ◆ The special conditions of this permit are identical to those in Construction Permit 092002-014 and have been applied in Permit Condition 002.

Construction Permit 1298-010, Issued November 27, 1998:

- ◆ This Section (5) NSR Permit is for the production of Cefaclor USP using existing equipment.
- ◆ Special Condition 1 requires the installation to comply with 10 CSR 10-3.090. 10 CSR 10-3.090 has since been rescinded and replaced by 10 CSR 10-6.165. 10 CSR 10-6.165 has been applied in Section (IV) of this permit.

Construction Permit 0399-010, Issued February 18, 1999:

- ◆ This Section (5) NSR Permit is for the recovery of Cephalexin USP from the mother liquors.
- ◆ Special Condition 1 contains the requirements for completing a proposed test plan when performance testing is required. The permit does not require performance testing; therefore, this requirement was not deemed applicable.

Construction Permit 102001-011, Issued October 19, 2001:

- ◆ This Section (6) NSR Permit is for increased Cephalexin production.
- ◆ Special Condition 1 allows for a 40 tpy VOC emissions increase from the production of Cephalexin. Based on the emission factors provided in the construction permit, this equates to an additional 285 batches. The Cephalexin process was originally permitted for 641 batches per Construction Permit 0989-004. The new cumulative batch limit on the Cephalexin PMPU is 926 batches per year (641 + 285). This limit was modified by a no construction permit required determination issued October 27, 2005.
- ◆ Special Condition 2 was superseded by Construction Permit 082003-002.

- ◆ Special Condition 3 required modification to Stack S-606 in order for the installation to pass methanol modeling. Subsequent installation of an RTO in 2003 ensured that the installation passed modeling without stack modifications.
- ◆ Special Condition 4 required the installation to submit a report documenting that Permit 0989-004 resulted in VOC emissions of less than 100 tons per year. This report has already been submitted; therefore, this requirement is no longer deemed applicable.

Construction Permit 092002-014, Issued August 20, 2002:

- ◆ This Section (5) NSR Permit is for increased Amoxicillin production.
- ◆ The special conditions of this construction permit have been applied in this operating permit (see Permit Condition 002).

Construction Permit 022003-014, Issued January 13, 2003:

- ◆ This Section (5) NSR Permit is for the recovery of Cephalexin Monohydrate USP (Bulk) from the mother liquors (ML).
- ◆ This permit contains no special conditions.

Construction Permit 082003-002, Issued July 15, 2003:

- ◆ This Section (5) NSR Permit is for the installation of an RTO.
- ◆ Special Condition 1 states that the conditions of this permit supersede Special Condition 2 of Construction Permit 102001-011.
- ◆ Special Condition 2 has been applied in this permit (see Permit Condition 001).

No Construction Permit Required Determination, Issued March 15, 2004:

- ◆ This no construction permit required determination is for temporary production of Dicloxicillin³³.

No Construction Permit Required Determination, Issued October 27, 2005:

- ◆ This no construction permit required determination is for modifications to the distillation process used during production of Amoxicillin.

No Construction Permit Required Determination, Issued October 27, 2005:

- ◆ This no construction permit required determination is for the production of Cefadroxil and Cefprozil using the existing Cephalexin equipment.
- ◆ In order to ensure that the production of Cefadroxil and Cefprozil does not allow the installation to exceed the 926 batches per year limit on the Cephalexin equipment, the limit has been extended to

³³ This temporary no construction permit required determination has expired; however, the installation still produces Dicloxicillin. Based on potential to emit calculations submitted by the installation on August 24, 2015, R-101, R-102, T003, R-004, N-001, N-201, T004, and T201 are required to operate controls by MACT GGG in order to reduce emissions by at least 98%. D-001 and V-101 do not require controls under MACT GGG as the HAP concentrations from their process vents are below 50 ppmv. With the federally enforceable MACT GGG controls on the indicated equipment, emissions from the Dicloxicillin PMPU meet the construction permit exemption at 10 CSR 10-6.061(3)(A)3.B. Potential to emit calculations are based on a batch length of eight hours and maximum methylene chloride content of 1,177 kg per batch. Any future increase in methylene chloride content or decrease in batch length should be reviewed for construction permit applicability.

all three pharmaceutical products. This limit was modified by a no construction permit required determination issued March 28, 2008.

No Construction Permit Required Determination, Issued March 23, 2006:

- ◆ This no construction permit required determination is for temporary production of Ampicillin.

No Construction Permit Required Determination, Issued June 14, 2006:

- ◆ This no construction permit required determination is for modifications to Amoxicillin Trihydrate production.

No Construction Permit Required Determination, Issued March 28, 2008:

- ◆ This no construction permit required determination is for the production of Cefdinir using the existing Cephalexin, Cefadroxil, and Cefprozil equipment.
- ◆ In order to ensure that the production of Cefdinir does not allow the installation to exceed the 926 batches per year limit on the Cephalexin, Cefadroxil, and Cefprozil equipment, the limit has been extended to all four pharmaceutical products. This limit has been applied in Permit Condition 003.

Construction Permit 122009-011, Issued December 17, 2009:

- ◆ This Section (5) NSR permit allows for increased Amoxicillin production (2,100 batches per year).
- ◆ This permit contains no special conditions.

No Construction Permit Required Determination, Issued December 12, 2013:

- ◆ This no construction permit required determination is for modifications to WWTP Wastewater Treatment Plant.

NSPS Applicability

40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* applies to the 16.3 MMBtu/hr boiler and has been applied within this permit (see Permit Condition 005). This regulation does not apply to the (2) 8.4 MMBtu/hr boilers per §60.40c(a) as they are rated at less than 10 MMBtu/hr.

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* applies to T825 30,000 gallon Waste Methanol or Spent Mother Liquor Tank and has been applied in this permit (see Permit Condition 006). This regulation does not apply to tanks with a capacity of less than 75 m³ (19,813 gallons) per §60.110b(a). This regulation does not apply to the following tanks per §60.110b(b) as they contain liquids with a maximum true vapor pressure less than 15.0 kPa:

Emission Source	Description	Maximum True Vapor Pressure (kPa)
T810	20,000 gallon High Strength Wastewater Tank	Assumed to be less than 15.0 kPa due to high percentage of water
T814	39,000 gallon Unwashed Toluene Tank	4.0 kPa
T815	26,000 gallon Unwashed Toluene Tank	4.0 kPa
T820	20,000 gallon Toluene Tank	4.0 kPa
T822	20,000 gallon Dimethylformamide Tank	4.2 kPa

T824	30,000 gallon Waste Toluene Tank	4.0 kPa
T1403	20,000 gallon Empty Tank	N/A

This regulation is not applicable to T826 30,000 gallon Methylene Chloride Still Bottoms Tank or T827 30,000 gallon Waste Methylene Chloride Tank as these tanks contain methylene chloride which does not meet the definition of volatile organic liquid at §60.111b as methylene chloride is not a volatile organic compound.

40 CFR Part 60, Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* is not applicable to the installation and has not been included in this permit. The two internal combustion engines at the installation (1231 244 HP Diesel Fire Water Pump and G003 900 HP Diesel Emergency Electric Generator) were both installed in 1990 prior to the applicability dates in §60.4200.

MACT Applicability

40 CFR Part 63, Subpart H – *National Emission Standards for Organic HAPs for Equipment Leaks* applies to the installation per MACT GGG and has been applied in this permit (see Permit Condition PW002).

40 CFR Part 63, Subpart GGG – *National Emission Standards for Pharmaceuticals Production* applies to the installation and has been applied in this permit (see Permit Conditions PW001 and PW002).

40 CFR Part 63, Subpart EEEE – *National Emission Standards for HAPs: Organic Liquids Distribution (Non-Gasoline)* does not apply to the installation. §63.2338(c)(1) states that storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another MACT are excluded from the affected source. These emission sources are subject to and complying with MACT GGG.

40 CFR Part 63, Subpart ZZZZ – *National Emissions Standards for HAPs for Stationary Reciprocating Internal Combustion Engines* applies to the 244 HP Diesel Fire Water Pump and has been applied in this permit (see Permit Condition 007). The 900 HP Diesel Emergency Generator is conditionally exempt from this regulation per §63.6590(b)(3)(iii) provided it meets the definition of emergency at §63.6675. (see Permit Condition 008).

40 CFR Part 63, Subpart DDDDD – *National Emission Standards for HAPs for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* applies to the boilers and has been applied in this permit (see Permit Conditions 009 and 010).

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

40 CFR Part 61, Subpart M – *National Emission Standards for Asbestos* is applicable to the installation and has been applied within this permit (see Section IV. Core Permit Requirements).

Compliance Assurance Monitoring (CAM) Applicability

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and

- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

40 CFR Part 64 is not applicable because none of the pollutant-specific emission units uses a control device to achieve compliance with a relevant standard.

Greenhouse Gas Emissions

The installation is a minor source of greenhouse gases with potential CO₂e emissions of 36,306.80 tons per year.

Updated Potential to Emit for the Installation

Pollutant	Potential to Emit (tpy) ³⁴
CO	20.83
CO ₂ e	36,306.80
HAP	21.45
NO _x	48.31
PM ₁₀	3.35
PM _{2.5}	3.09
SO _x	7.59
VOC	6.98
Methylene Chloride (75-09-2)	15.72
Methanol (67-56-1)	3.03
Triethylamine (121-44-8)	1.09
Toluene (108-88-3)	1.03
Hexane (110-54-3)	0.45
Formaldehyde (50-00-0)	0.07
Dimethyl Formamide (68-12-2)	0.03
HCl (7647-01-0)	0.03

³⁴ Each emission unit was evaluated at 8,760 hours of uncontrolled annual operation unless otherwise noted:

- Cephalixin, Cefdinir, Cefprozil, and Cefadroxil production is bottlenecked due to the sharing of equipment. As these PMPUs share reactors, centrifuges, and a dryer only one antibiotic can be produced at any given time.
- Amoxicillin and Dicloxicillin production is bottlenecked due to the sharing of equipment. As these PMPUs share centrifuges and the fluid bed dryer.
- Potential emissions may be lower than actual emissions as potential emissions from the following equipment could not be calculated and included in the Installation PTE:
 - Cephalixin PMPU
 - SRT V-852 Toluene Distillation Column
 - T030 6,000 gallon Triethylamine Tank
- The 244 HP diesel fire water pump and 900 HP diesel emergency generator were evaluated at 500 hours of annual operation as specified in EPA guidance document “Calculating Potential to Emit (PTE) for Emergency Generators” (September 1995).
- PTE calculations do not include MACT GGG equipment leaks.

Other Regulatory Determinations

10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants* is applicable to the installation and has been applied in this permit (see Permit Condition 004). The space heaters and the RTO are exempt per 10 CSR 10-6.220(1)(L) as they burn only natural gas. 1231 Diesel Fire Water Pump and G003 Diesel Emergency Generator are not subject to this regulation per 10 CSR 10-6.220(1)(A). The 16.3 MMBtu/hr Boiler is exempt from this regulation per 10 CSR 10-6.220(1)(H) as it is regulated by NSPS Dc.

10 CSR 10-6.261 *Restriction of Emission of Sulfur Compounds* is applicable to the installation and has been applied in this permit (see Permit Conditions 011 and 012). This regulation is not applicable to the 16.3 MMBtu/hr boiler per 10 CSR 10-6.261(1)(C)1 as it is subject to sulfur restrictions under NSPS Dc. The space heaters are exempt from this regulation per 10 CSR 10-6.261(1)(A) as they exclusively combust pipeline grade natural gas.

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the Air Pollution Control Program a schedule for achieving compliance for that regulation(s).

Response to Public Comments

The draft Part 70 Operating Permit, Project 2012-11-030, for Teva Pharmaceuticals USA, Inc. (007-0040) was placed on public notice as of April 14, 2017, for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: <http://www.dnr.mo.gov/env/apcp/PermitPublicNotices.htm> on Friday, April 14, 2017.

On May 12, 2017, the Air Pollution Control Program received comments from Mark A. Smith, Air Permitting and Compliance Branch Chief for EPA Region 7.

EPA Comment #1:

First, Plant Wide Permit Condition PW001 incorporates the applicable requirements from 40 CFR Part 63, Subpart GGG-*National Emission Standards for Pharmaceuticals Production* for the entire installation. According to Section I: **Installation Description and Equipment Listing**; Teva Pharmaceuticals in Mexico, Missouri has ten (10) pharmaceutical manufacturing process units (PMPU); each used in the manufacturing of a specific pharmaceutical product or the reclamation / recovery of a specific chemical material. However, MoDNR is presenting only one permit condition to describe the limitations, standards, compliance procedures, monitoring, record keeping and reporting as a plant wide condition for all ten of these PMPU. Additionally, Permit Condition PW001 includes all the available control and compliance options allowed under the Pharmaceuticals Production Standard in 40 CFR Part 63, Subpart GGG, irrespective of whether or not the methods are being used by the permittee. This approach of one permit condition for the entire installation is an operating permit, with very generic requirement descriptions makes for a difficult operating permit review and regulatory field compliance verification. It would appear to EPA, that a more effective approach might be to include a specific permit condition, written around each individual PMPU, with identification of the specific emission points and emission units. These individual PMPU permit conditions might then be drafted to include the permittee's actual approach to control and compliance.

Teva Pharmaceutical USA, Inc.'s Response:

Teva agrees that the permit would be improved (for review and compliance verification) if the Subpart GGG requirements were more facility-specific. For example, the Pharma MACT compliance requirements would be easier to track if separate permit conditions were drafted for each PMPU and they articulated the compliance option(s) actually used by Teva as described in the Notice of Compliance Status Report and semi-annual MACT reports submitted by Teva. It would also help to exclude old PMPUs that are not part of the five (5) PMPUs currently operated by the facility. Attachment A presents a series of tables that list process equipment comprising the collection of emission points under each PMPU. The equipment tag designation (e.g. Teva's designation for the specific reactor, vessel, condenser, distillation column, etc.), description of the equipment's service, control device, Pharma MACT process vent classification, and MACT-required HAP control efficiency are also presented on each table. The updated PMPU list accounts for the removal of a number of pharmaceutical intermediates production processes and addition of several new active pharmaceutical ingredient (API) production processes since the original Title V permit was issued in April 2008.

Amoxicillin Production PMPU
 Pen Building Emission Units

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
R-005	6-APA Slurry Tank	Fixed-Bed Regenerative Carbon Adsorber	Existing small process vents	93% HAP Emission Reduction combined load from all PMPU Process Vents
T-002	Mix Tank			
R-001	Mixed Anhydride Reactor			
R-002	Mixed Anhydride Reactor			
R-105	Hydrolysis Vessel/ Phase Separation			
R-107	Crystallization Reactor			
N-001	Centrifuge			
N-004	Centrifuge			
N-101	Centrifuge			
N-201	Centrifuge			
T004	Mother Liquor Tank			
T027	Mother Liquor Tank			
T115	Mother Liquor Tank			
T201	Mother Liquor Tank	Fixed Bed Regenerative Carbon Adsorber		
R-325	Vacuum Extraction			
R-304	Vacuum Extraction			
T301	Amoxicillin Wastewater Feed Tank to R-306			
R-306	Mother Liquor/ Carbon Adsorber Vacuum Strip	Packed-Bed Water Scrubber (S-201)		
T107	HCl Load Tank			
D-001	Fluid Bed Dryer	None	Not regulated as process vents- HAP Vapor Concentrations below 50 ppmv	No NESHAP Control Required
T040/T114	NaOH Tank			

Operating Scenario #1 – Methylene Chloride Reclamation in the SSP Batch still Dedicated to Amoxicillin PMPU

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
V-001 Feed/T010	Spent MeCl ₂ Feed Tank	Environmental Vent Condenser E-004	Existing small process vents connected to environmental vent condenser and then to Carbon Adsorber	93% HAP Emission Reduction combined load from all PMPU Process Vents (combined control from E-004 condenser and carbon adsorber)
V-001	SSP Distillation Column			
V-028	MeCl ₂ Condensate Decanter			
T-011	Recovered MeCl ₂ Receiver			
T-024	First/last cut MeCl ₂ Receiver			
E-002	SSP Primary Condenser			
E-003	SSP Secondary Condenser			
E-004	SSP Environmental Vent Condenser	Fixed-Bed Regen Carbon Adsorber	Existing small process vent	

Operating Scenario #2 – Acetone Reclamation in the SSP Batch still Dedicated to Amoxicillin PMPU

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
V-001 Feed	Spent Acetone Feed Tank	None	Not regulated as process vents- HAP Vapor Concentrations below 50 ppmv	No NESHAP Control Required
V-001	SSP Distillation Column			
V-028	Acetone Condensate Decanter			
T-012	Recovered Acetone Receiver			
T-013	First Cut Acetone Receiver			
T-025	Last Cut Acetone Receiver			
E-002	SSP Primary Condenser			
E-003	SSP Secondary Condenser			

Dicloxicillin Production PMPU
 Pen Building Emission Units

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
R-101	6-APA Slurry Tank	Fixed-Bed Regenerative Carbon Adsorber	Existing small process vents	93% HAP Emission Reduction combined load from all PMPU Process Vents
R-102	Diazoyl Chloride Tank			
T-003	52E Solution Tank			
R-004	Crystallization Reactor			
N-001	Centrifuge			
N-004	Centrifuge			
N-201	Centrifuge			
T-004	Mother Liquor Tank			
T-027	Mother Liquor Tank			
T-201	Mother Liquor Tank			
D-001	Fluid Bed Dryer	None	Not regulated as process vents- HAP Vapor Concentrations below 50 ppmv	No NESHAP Control Required
V-101	NaOH Tank			

Cephalexin Production PMPU
 Ceph Building Emission Units

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
R-605	Silylation Reactor	Regenerative Thermal Oxidizer (RTO)	Existing small process vents	93% HAP Emission Reduction combined load from all PMPU Process Vents
R-601	Condensation Reactor			
R-602	Hydrolysis Reactor / Phase Separation			
R-604	Crystallization Reactor			
T-616	Tank			
N-601	Centrifuge			
N-602	Centrifuge			
R-303	Toluene Wash / Recovery Vessel			
T-606	HCl load tank	Scrubber Y-606		
D-601	Fluid Bed Dryer	Scrubber Y-601 / RTO	Large Process Vent	98% HAP Emissions Reduction

Toluene Reclamation in Continuous Distillation Column V-852 (dedicated to Cephalexin PMPU)

E-854/855	Toluene Distillation Column Pre-heat Feeders	Vent Condenser E-862	Existing small process vents connected to environmental vent condenser then to final control device (RTO)	93% HAP Emission Reduction combined load from all PMPU Process Vents
V-852	Toluene Distillation Column			
V-843/V-845	Toluene Still Overheads Feed Tank (2 nd Distillation) vents to Secondary Condenser V-845			
V-846	Reclaimed Toluene Transfer Vessel			
V-861	Toluene Still Overheads Decanter			
E-853	Toluene Still Primary Condenser			
E-862	Toluene Still Environmental Vent Condenser	Regenerative Thermal Oxidizer	Existing small process vent	

Methanol Reclamation in Continuous Distillation Column V-873 (dedicated to Cephalexin PMPU)

E-871	MeOH Distillation Column Pre-heat Feeder	Vent Condenser E-878	Existing small process vents connected to environmental vent condenser then to final control device (RTO)	93% HAP Emission Reduction combined load from all PMPU Process Vents (combined control from E-878 condenser and RTO)
V-852	MeOH Distillation Column			
V-876	MeOH Still Reflux Drum			
E-875	MeOH Still Primary Condenser			
E-878	MeOH Still Environmental Vent Condenser	Regenerative Thermal Oxidizer	Existing small process vent	

Cefadroxil/Cefprozil Production PMPU
 Ceph Building Emission Units
 Operating Scenario 1 – Cefadroxil Production

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
R-605	Silylation Reactor	Carbon Canisters	Existing small process vents	93% HAP Emission Reduction combined load from all PMPU Process Vents
R-601	Mixed Anhydride Reactor			
R-602	Phase Separation			
R-604	Crystallization Reactor	Regenerative Thermal Oxidizer (RTO)		
N-601	Centrifuge			
N-602	Centrifuge			
R-402	Desolvation			
N-501	Centrifuge			
D-501	Vacuum Dryer			

Operating Scenario 2 – Cefprozil Production

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
R-605	Silylation Reactor	Carbon Canisters	Existing small process vents	93% HAP Emission Reduction combined load from all PMPU Process Vents
R-601	Mixed Anhydride Reactor			
R-602	Phase Separation			
R-604	Crystallization Reactor	Regenerative Thermal Oxidizer (RTO)		
N-601	Centrifuge			
N-602	Centrifuge			
R-402	Desolvation			
N-501	Centrifuge			
D-501	Vacuum Dryer			

Cefdinir Production PMPU
 Ceph Building Emission Units

Equipment Tag	Service	Control Devices	Pharma MACT Process Vent Classification	NESHAP Control Requirement
R-602	Condensation Reaction / Extracion	Carbon Canisters	Existing small process vents	93% HAP Emission Reduction combined load from all PMPU Process Vents
R-604	Hydrolysis / Crystallization Reactor			
N-501	Centrifuge			
R-501	Carbon Treatment / Filtration	No control device – Cefdinir purification steps are all aqueous	Not regulated as process vents- HAP Vapor Concentrations below 50 ppmv	No NESHAP Control Required
R-502	Crystallization			
N-601	Centrifuge			
N-602	Centrifuge			
D-601	Fluid Bed Dryer			

Missouri Air Pollution Control Program Response:

Teva should have included the updated PMPU list as part of their Title V permit renewal application, 2012-11-030, and should have revised the application for any subsequent changes as required by §70.5(b).

Permit Condition PW001 does not include all available control and compliance options allowed under MACT GGG. MACT GGG allows the use of catalytic incinerators, flares, and boilers/process heaters as control devices; however, as the installation does not use these control devices, requirements for these control devices were not included in the permit. The installation uses three scrubbers (S-201, Y-601, Y-606, and Y-801), an RTO

(RTO-01), a regenerative carbon adsorption system (APC-018), condensers (E-004) and nonregenerative carbon canisters (CCANISTERS) to comply with MACT GGG. As control devices are shared by multiple PMPUs it would be inappropriate to separate out MACT GGG into PMPU-specific permit conditions. The specific operating parameters for each control device have already been specified in footnotes throughout Permit Condition PW001. The requirements for the installation's carbon canisters were inadvertently omitted in Permit Condition PW001; therefore, Permit Condition PW001 has been modified to include these requirements. In an effort to provide further clarity on the MACT GGG requirements for each individual piece of equipment, the PMPU tables in Section I of the permit have been revised.

EPA Comment #2:

Second, Operational Limitation 3., in Permit Condition 001, requires the permittee to conduct performance testing within "180 days of permit issuance" to establish the minimum operating temperature required for the RTO to achieve the MACT GGG destruction efficiency. This requirement is included in the operating permit due to it being a condition of Permit to Construct #082003-002, issued July 15, 2003. MoDNR is encouraged to specify whether the required performance testing was to be completed by January 15, 2004; or 180 days following the issuance date of this operating permit.

Teva Pharmaceutical USA, Inc.'s Response:

Teva understands that although destruction efficiency testing was previously performed per Permit #082003-002, MoDNR will require re-testing after renewal of the Title V operating permit. This re-testing will provide the basis for establishing the RTO combustion chamber temperature limit at a lower level. The only large process vent (requiring 98% control) is the fluid bed dryer which is operated as part of the Cephalexin (CXN) process. Because the CXN process is currently not operating, the timing to complete testing will be contingent on future CXN production, CSN is only expected to be produced sporadically in the future, and with limited advance notice, if at all. Therefore, instead of 180 days following permit issuance, it is recommended that the permit allow destruction testing of the RTO next time CXN is manufactured. Teva will notify MoDNR within 1 week of receiving an order that triggers new CXN manufacturing, although this notification will likely be less than 180 days before the manufacturing or testing occurs.

Missouri Air Pollution Control Program Response:

This operating permit has been modified to clarify that testing is required within 180 days of issuance of this operating permit. Construction Permit 082003-002 did not require performance testing of the RTO. The installation conducted performance testing of the RTO on December 22, 2005 under a consent decree to demonstrate compliance with MACT GGG. The stack test report indicated that the RTO achieved a DRE of 96.36% at a temperature set point of 1550°F and that Scrubber (Y-601) achieved a reduction efficiency of 94.86%. Collectively, the RTO and Scrubber achieve a reduction efficiency of 99.8%; thus, D-601 Fluid Bed Dryer while controlled by both control devices demonstrates compliance with §63.1254(a)(3). The installation contends that they should be allowed to operate the RTO at a temperature of 1520°F based on the average temperature from a chart of actual chamber temperatures from December 22, 2005 to

December 26, 2005 while the Air Pollution Control Program contends that only temperature data from during the three one-hour test runs should be used to establish the average operating temperature of the RTO and that all other RTO temperature data from the time period is irrelevant. In order to resolve this disagreement and ensure that the RTO is indeed achieving the required destruction efficiency, the installation is being required to retest and reestablish the minimum operating temperature for the RTO.

The RTO is used to control emissions from the Amoxicillin, Dicloxicillin, Cephalexin, Cefadroxil, and Cefprozil PMPUs. There is no requirement in Construction Permit 082003-002 or MACT GGG that the installation be producing Cephalexin during the RTO testing; therefore, there should be no issue with conducting the stack testing within 180 days of the issuance of this permit. The only source subject to a requirement to achieve a reduction of 98% by MACT GGG is D-601 Fluid Bed Dryer (Cephalexin PMPU); however, D-601 Fluid Bed Dryer uses both Y-601 Scrubber and the RTO to achieve 98% reduction. As Y-601 Scrubber has a tested and undisputed reduction efficiency of 94.86%, the RTO would only need to achieve a DRE of 62% for D-601 Fluid Bed Dryer to demonstrate compliance with MACT GGG. The RTO is required to achieve a minimum DRE of 93% from all other MACT GGG processes vented to it (i.e. Amoxicillin, Dicloxicillin, Cefadroxil, and Cefprozil PMPUs). Therefore, the installation does not need to wait until Cephalexin is next produced to demonstrate that the RTO does indeed achieve a minimum DRE of 93% at operating temperatures below 1550°F for the Amoxicillin, Dicloxicillin, Cefadroxil, and Cefprozil PMPUs.

EPA Comment #3:

Third, the Operational Limitations in Permit Condition 002 require the permittee to control emissions, from reactors and tanks associated with Amoxicillin PMPU, using an activated carbon system; and to monitor the activated carbon system for “breakthrough;” and when “breakthrough” occurs; to cease production until activated carbon is replaced. MoDNR is encouraged to include, in the monitoring / record keeping section of Permit Condition 002, a description of “breakthrough” and what the monitored parameter is and its value that determines when “breakthrough” occurs.

Teva Pharmaceuticals USA, Inc.’s Response:

Teva monitors the total hydrocarbon (THC) concentrations at the carbon adsorber outlet using a flame ionization analyzer (FIA). Defining the specific THC concentration that indicates breakthrough is occurring is a good question because breakthrough is not appropriately defined using a single THC concentration threshold. The system controls a highly variable organic HAP load from various process vents, solvent distillation system vents, vacuum stripping of process wastewater, as well as occasional emissions from methylene chloride truck unloading, many of which operate simultaneously. If breakthrough is defined as the point where the activated carbon removal efficiency drops to less than the construction permit required removal efficiency, then it would vary depending on which portion of the process is operating. Construction Permit 092002-014 was based on a HAP removal efficiency of 95%, averaged over the length of the batch (typically 8 hours). Therefore, the specific carbon adsorber outlet THC concentration that indicates breakthrough will be variable, depending on the inlet THC concentration

associated with the batch vent or ancillary operation episodic emission event occurring at the time.

To establish an appropriate breakthrough warning, Teva proposes to install a THC monitor at the inlet of the carbon adsorber, which when combined with the outlet THC reading, will provide estimated removal efficiency directly to the operators in the control room so that immediate corrective action can be taken. As such, Teva requests that the current corrective action language for a breakthrough event (“*when breakthrough occurs; to cease production until active carbon is replaced*”) be modified to reflect the method in which the unit operates and the inability to instantaneously shut down the process without compromising product quality and safety. Instead of the current language, Teva proposes the following:

- If a breakthrough warning occurs and the other carbon vessel is in stand-by mode (after its regeneration cycle is complete), the inlet flow will be redirected to the other carbon vessel.
- Otherwise, if the regeneration cycle is not yet complete, Teva will wait to switch beds, because typical timer sequence (approximately 90 minutes) is less than the time required for a controlled shut-down of the Amoxicillin or Dicloxicillin production processes. Teva would continue to monitor outlet concentrations to confirm excess emissions do not occur – for example, that the average HAP removal efficiency averaged over the entire 8-hr batch remained above 95% control. If the minimum control threshold is not met after waiting and switch to the second bed, then Teva will begin a controlled shutdown of the process and will document the event and notify MoDNR with 10 days.

Missouri Air Pollution Control Program Response:

The Amoxicillin PMPU is controlled by Fixed Bed Regenerative Carbon Adsorber (APC-018), per the requirements of MACT GGG the minimum regeneration frequency of APC-018 was established to be every 12 hours and upon breakthrough. Where breakthrough occurs when the batch-average difference between the THC Inlet Analyzer and THC Outlet Analyzer on APC-018 is less than 95%. A cross reference to footnote 9 was included in Permit Condition 002 to clarify the requirements for APC-018.

If breakthrough occurs and Teva Pharmaceuticals USA, Inc. is not able to switch to the other carbon vessel because it is undergoing regeneration and Teva Pharmaceuticals USA, Inc. is not able to shutdown the Amoxicillin PMPU, Teva Pharmaceuticals USA, Inc. is required to submit an SSM report per the requirements of 10 CSR 10-6.050 *Start-Up, Shutdown, and Malfunction Conditions*.

EPA Comment #4:

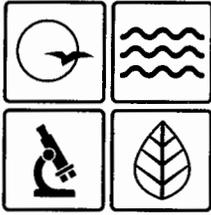
Finally, the draft operating permit contains several acronyms (i.e. CEDRI, CDX, CI RICE, RICE, etc.), some of which are defined elsewhere in the draft permit and some which are not defined in the permit. Many of these acronyms may not be identifiable by some of the public reviewers, so EPA suggests that MoDNR consider reviewing and editing the list of common acronyms in Attachment F to insure it is complete and accurate for the specific operating permit.

Teva Pharmaceutical USA, Inc.'s Response:

Teva agrees that all acronyms should be defined in the permit.

Missouri Air Pollution Control Program Response:

Attachment F has been revised as requested.



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

OCT 17 2017

Mr. Chad Dykes
Teva Pharmaceuticals USA, Inc.
5000 Snyder Dr.
Mexico, MO 65265

Re: Part 70 Operating Permit
Installation ID: 007-0040, Permit Number: OP2017-077

Dear Mr. Dykes:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions or need additional information regarding this permit, please contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS:ahj

Enclosures

c: PAMS File: 2012-11-030



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