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: **OP2010-064**
Expiration Date: JUN 25 2015
Installation ID: 127-0001
Project Number: EX29400001028

Installation Name and Address
BASF Corporation-Hannibal Plant
3150 Highway JJ
Palmyra, MO 63461
Marion County

Parent Company's Name and Address
BASF Corporation Agricultural Products
P.O. Box 13528
26 Davis Drive
Research Triangle Park, NC 27709-3525

Installation Description:
BASF Corporation-Hannibal Plant operates an agricultural chemical production installation. The company produces insecticides and pesticides. Products manufactured at this installation include the herbicides: ARSENAL®, BACKDRAFT®, BASAGRAN®, CADRE®, EXTREME®, KIXOR®, PROWL®, PROWL H_2O®, PURSUIT®, RAPTOR®, and SCEPTER®, as well as the insecticides ALVERDE®, THIMET®, COUNTER®, and PIRATE®.

JUN 23 2010
Effective Date

Director or Designee
Department of Natural Resources

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Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

BASF Corporation-Hannibal Plant operates an agricultural chemical production installation. The company produces insecticides and pesticides. Products manufactured at this installation include the herbicides: ARSENAL®, BACKDRAFT®, BASAGRAN®, CADRE®, EXTREME®, KIXOR® , PROWL®, PROWL H_2O®, PURSUIT®, RAPTOR®, and SCEPTER®, as well as the insecticides ALVERDE®, THIMET®, COUNTER®, and PIRATE®.

For simplicity, this Operating Permit has separated the BASF facility into the individual processing plants. These are the Pyrrole®/XXXXX/320I Plant, the THIMET®/COUNTER® Plant, the IMI-1 Plant, the IMI-2 Plant, the PROWL® and SAR Plant, the Central Treatment Systems Plant, the Crop Protection Products (CPC) Plant, and the Services and Utility Plant. These areas are explained in detail in the Statement of Basis.

The installation is classified as major for all criteria air pollutants. The installation is subject to the following federal regulations: 40 CFR Part 60 Subpart K-*Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978;* 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, 198;* 40 CFR Part 63 Subpart EEE—*National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors;* 40 CFR Part 63 Subpart MMM-*National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production;* and 40 CFR Part 63 Subpart FFFF-*National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufaturing.* The applicability of these regulations are described in the Statement of Basis.

BASF has requested confidentiality for much of the information in this permit. The Air Pollution Control Program has granted this request.

The following three tables detail the overall plant emissions, and the speciated HAP emissions for the previous five years.

Table 1: Total Reported Air Pollutant Emissions from BASF-Hannibal Installation for the last five years.

Year	Partiuclate Matter < ten microns (PM-10)	Particulate Matter < 2.5 microns (PM-2.5)	Sulfur Oxides (SOx)	Nitrogren Oxides (NOx)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAP)
2008	175.05	142.19	2,437.52	553.83	30.85	147.32	0.17	38.88
2007	156.34	134.43	2,407.52	469.30	27.36	143.25	0.03	32.42
2006	148.96	130.27	2,262.68	476.85	29.27	160.60	0.03	35.89
2005	149.36	127.19	2,154.91	479.47	32.32	140.46	0.03	31.11
2004	116.93	97.14	1,956.86	361.77	21.02	113.80	0.13	26.71

HAP column includes hazardous air pollutants that could be reported as HAP, PM-10, or VOC.

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.

Pyrrole/MMPDC/320I Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0001a	PY-04	Pesticides Manufacturing Building Vents	None
EU0001	None	Heat Exchanger (process #631-035)	None
EU0002	PY-06	Process Section 180: Batch Product Dryer (process #180-029); Installed 1999	Scrubber (process #631-206/207/210), Thermal Oxidizer (process #631-401), Scrubber (631-402)
EU0003	PY-06	Process Section 120: Reactor (process #120-001); Installed 1999	
EU0004	PY-06	Process Section 130: Reactor (process #130-151); Installed 1999	
EU0005	PY-06	Process Section 140: Reactor (process #140-001); Installed 1999	
EU0006	PY-06	Process Section 150: Reactor (process #150-001); Installed 1999	
EU0007	PY-06	Process Section 150: Reactor (process #150-031); Installed 1999	
EU0008	PY-06	Process Section 150: Reactor (process #150-005); Installed 1999	
EU0009	PY-06	Process Section 150: Process Tank (process #150-043); 900 gallon capacity; Installed 1999	
EU0010	PY-06	Process Section 160: Reactor (process #160-001); Installed 1999	
EU0011	PY-06	Process Section 160: Wet Xylene for Pyrrole/MMPDC production/Acetic Acid for 320 I Tank (process #160-007); 11,000 gallon capacity; Installed 1999	
EU0012	PY-06	Process Section 170: Centrifuges (process # 170-004 A/B); Installed 1999	
EU0013	PY-06	Process Section 170: Process Tank (process #170-003); 1,500 gallon capacity; Installed 1999	
EU0014	PY-06	Process Section 170: Centrifuge Feed Tank (process #170-001); 12,000 gallon capacity; Installed 1999	
EU0015	PY-06	Process Section 170: Mother Liquor Tank (process #170-005); 14,000 gallon capacity; Installed 1999	
EU0016	PY-06	Process Section 190: Reactor (process #190-001); Installed 1999	
EU0017	PY-06	Process Section 200: Reactor (process #200-001); Installed 1999	
EU0018	PY-06	Process Section 220: Reactor (process #220-001); Installed 1999	
EU0019	PY-06	Raw Material Section 110: Triethylamine Storage Tank (process #110-007); 27,900 gallon capacity; Installed 1999	
EU0020	PY-06	Raw Material Section 110:Methanol/IPA Storage Tank (process #110-021); 27,900 gallon capacity; Installed 1999	
EU0021	PY-06	Raw Material Section 110:Toluene/Xylene Storage Tank (process #110-034); 27,900 gallon capacity; Installed 1999	
EU0022	PY-07	Emergency bypass for Thermal Oxidizer seal pot from PY-06; vents to atmosphere	None
EU0023	PY-06	Waste Storage Section 633: Acidic Aqueous Storage Tank (process #633-006); 11,600 gallon capacity; Installed 1999	Scrubber (process #631-206/207/210), Thermal Oxidizer (process #631-401), Scrubber (631-402)
EU0024	PY-06	Waste Storage Section 633: Basic Waste Hold Tank (process #633-001); 36,200 gallon capacity; Installed 1999	
EU0025	PY-06	Waste Storage Section 633: Organic Waste Hold Tank (process #633-004); 34,200 gallon capacity; Installed 1999	
EU0026	PY-08	Waste Storage Section 633: Floor Drain Hold Tank (process #633-012); 7,800 gallon capacity; Installed 1999	Voluntary Carbon Canister
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank (process #633-401); 24,800 gallon capacity; Installed 1999	RCRA Incinerators
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank (process #633-421); 14,000 gallon capacity; Installed 1999	RCRA Incinerators

THIMET/COUNTER Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0051	TC01/TC-02	Process Section 130	Condensation Seal Tank (process #631-004), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
EU0052	TC01/TC-02	Process Section 140	
EU0053	TC01/TC-02/TC-03/TC-03A	Ethanol Storage Tank (process #110-014), 32,400 gallon capacity, installed 1993	Storage Seal Tank (process #631-006), Open Flare (process #631-012), Standby Flare (process #631-050), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
EU0054	TC01/TC-02/TC-03/TC-03A	Waste Holding Section 633	
EU0055	TC01/TC-02/TC-04	Process Section 120	DETA Seal Tank (process #120-017), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019), and Venturi Scrubber (process #631-018)
EU0056	TC01/TC-02/TC-03/TC-03A	Formaldehyde Storage Tank (process #110-004), 30,600 gallon capacity, installed 1976	Storage Seal Tank (process #631-006), Open Flare (process #631-012), Standby Flare (process #631-050), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
EU0057	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank (process #150-001), 250,000 gallon capacity, installed 1976	
EU0058	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank (process #150-003A), 41,600 gallon capacity, installed 1976	
EU0059	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank (process #150-003B), 41,600 gallon capacity, installed 1976	

IMI-1 Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0060	IMI-1 1	Toluene Storage Tank (process #110-005); 12,700 gallon capacity; Installed 1986	None
EU0060a	IMI-1 2	MIBK Storage Tank (process #110-025); 8,000 gallon capacity; Installed 1986	None
EU0061	IMI-1 6A/B	Aminonitrile Storage Tank (process# 110-008); 30,000 gallon capacity; installed 1986	Acid Scrubber (process #633-214), followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0062	IMI-1 6A/B	Process Section 120	
EU0063	IMI-1 6A/B	Process Section 130	
EU0064	IMI-1 6A/B	Process Section 140/150	
EU0065	IMI-1 6A/B	Process Section 160	
EU0066	IMI-1 6A/B	Process Section 170	
EU0067	IMI-1 6A/B	Solvent Recovery Section 180	
EU0068	IMI-1 6A/B	Formulation Vessel (process #200-001)	
EU0069	IMI-1 6A/B	Formulation Vessel (process #200-037)	
EU0070	IMI-1 6A/B	Aqueous Waste Hold Tank (process #633-205)	
EU0071	IMI-1 6A/B	Organic Waste Hold Tank (process #633-207)	
EU0072	IMI-1 6B	IMI1 Facility Fumes bypass for HazWaste incineraters from Caustic Scrubber (631-205)	None
EU0073	IMI-1 11	Multipurpose Tank (process #110-034); 7,800 gallon capacity; Installed 1986	None
EU0074	IMI-1 13	Aqueous Premix Tank (process #200-034) 25,000 gallon capacity; installed 1986	None
EU0075	IMI-1 14	Final Product Storage Tank (process #200-011); 25,000 gallon capacity;installed 1986	None
EU0076	IMI-1 15	Drain Tank (process #633-203); 518 gallon capacity	None
EU0077	IMI-1 16	Drain Hold Tank (process #633-225); 8,000 gallon capacity	None
EU0078	IMI-1 17	Building Vent (fugitives)	None
EU0079	IMI-1 18 and IMI-1 6A/B	Solvent Storage Tank (process #110-031); 8,000 gallon capacity; Installed 1986;	Acid Scrubber (process #633-214), followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0080	IMI-1 19	Multipurpose Tank (process #110-014X) 7,000 gallon capacity Installed 1986	None
EU0081	IMI-1 5	Diacid Hopper (process #120-017)	Baghouse (process #631-018) followed by HEPA filter (process #631-024X)
EU0082	IMI-1 7	Process Section 190	Baghouse (process #631-025), followed by Direct Contact Condenser (process #190-005)
EU0083	IMI-1 9	Packaging Operations Section 190	Baghouse (process #190-019X) followed by HEPA filter (process #190-003X)
EU0084	IMI-1 10	Supersack Charging	Baghouse (process #631-310), followed by HEPA filter (process #631-312)
EU0085	IMI-1 10	Solids Charging Conveyor (process #200-054)	Baghouse (process #631-310), followed by HEPA filter (process #631-312)
EU0086	IMI-1 12	Urea Charging Hopper (process #200-006)	Bag Filter (process #631-022)

IMI-2 Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0087	IMI-2 1	Toluene Storage Tank (process# 110-029); 13,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-001)
EU0088	IMI-2 3	Methanol/Tetrahydrofuran Storage Tank (process #110-039); 13,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-005)
EU0088A	IMI-2 4	Dimethyl Sulfoxide/Acetic Acid/Sodium Methoxide Storage Tank (process #110-007); 13,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-002)
EU0089	IMI-2 7	Process Section 120: Diacid Handling	NaOCH3 Scrubber (process #631-060X), followed by HEPA filter
EU0090	IMI-2 8A/B	Process Section 120: Sodium Methoxide Handling	process vent condensers, followed by a seal pot, followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0091	IMI-2 8A/B	IMI-2 Waste Storage Section 630; Aqueous Waste Hold Tank (process # 633-010)	seal pot followed by Caustic Scrubber (process #631-205); followed by RCRA Incinerators
EU0092	IMI-2 8A/B	IMI-2 Waste Storage Section 630; Organic Waste Hold Tank (process #633-016)	seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0093	IMI-2 8A/B	IMI-2 Process Section 160	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0094	IMI-2 8A/B	IMI-2 Process Section 130	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0095	IMI-2 8A/B	IMI-2 Process Section 150	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0096	IMI-2 8A/B	IMI-2 Process Section 180	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0097	IMI-2 8A/B	IMI-2 Process Section 210	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0098	IMI-2 8A/B	IMI-2 Process Section 190	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0099	IMI-2 8A/B	Mother Liquor Storage Tank (process #190-005)	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0100	IMI-2 8A/B	Process Section 200; Wet Product Centrifuge	Product scrubber (process #631-070) to seal pot followed by caustic scrubber (process #631-205); (IMI2-10)Packaging Baghouse (process #631-068) followed by HEPA filter (process #631-XXX)
EU0101	IMI-2 10	Process Section 200; Product drying/packaging system	Packaging Baghouse (process #631-068) followed by HEPA filter (process #631-XXX)
EU0102	IMI-2 8B	IMI-2 Facility Fumes bypass for HazWaste incinerators from Caustic Scrubber (631-205)	none
EU0103	IMI-2 9/9A	IMI-2 Process Section 170	process vent condensers followed by Flare (process #631-026X)
EU0104	IMI-2 9A	Emergency Bypass for Flare (process #631-026X)	none
EU0105	IMI-2 11	Drain Hold Tank (process #633-013)	none
EU0106	IMI-2 12	Drumming Area Hold Tank (process #633-019)	none

PROWL Production Plant and Sulfuric Acid Regeneration (SAR) Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0108	PR-01	o-Xylene Storage Tank (process #110-002); 1,567,000 gallon capacity; installed 1975-76	vent condenser (process #631-021)
EU0109	PR-22	Reductive Alkyl Separator (process #150-011) & Filtration Hold Tank Vent (process #150-100);& Vent from Purge Catalyst Filter (process #150-009 was PR-26)	vent condenser (process #150-104)
EU0110	PR-47, PR-53, or PR-54	Nitration Seal Pot (process #003-055)	RCRA Incinerators
EU0111	PR-51	SAR Furnace (process #220-K31); 1997; Natural Gas Fired	None
EU0112	PR-52	SAR Combustion Air Preheater (process #220-X41); 1989; Natural Gas Fired	None
EU0113	PR-47, PR-53, or PR-54	Ethylene Dichloride Storage Tank (process #170-042); 30,300 gallon capacity; 1995	RCRA Incinerators
EU0114	PR-56	Prowl process bldg vent (process fugitives)	None
EU0115	PR-47, PR-53, or PR-54	Separation I Distillation Seal Pot (process #140-012)	RCRA Incinerators

Central Treatment Systems			
EU#	**EP#**	**Process Description**	**Control Devices**
North Waste Management Area			
EU0116	PR-95/53/54/47	"A" Aqueous Waste Storage Tank (process #633-003); 276,000 gallon capacity; installed 1975-76	condenser (process #631-116) to RCRA incinerators
EU0117	PR-95/53/54/47	"B" Aqueous Waste Storage Tank (process #633-203); 127,000 gallon capacity; installed 1989	condenser (process #631-203) to RCRA incinerators
EU0118	PR-95/53/54/47	"C" Aqueous Waste Storage Tank (process #633-060); 498,000 gallon capacity; installed 1975-76	condenser (process #631-060) to RCRA incinerators
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank (process #633-401); 24,800 gallon capacity; Installed 1999	condenser (process #631-407) to RCRA incinerators
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank (process #633-421); 14,000 gallon capacity; Installed 1999	condenser (process #631-427) to RCRA incinerators
EU0119	PR-39	Organic Waste Storage Tank (process #633-001); 38,600 gallon capacity; installed 1975-76	none
EU0120	PR-95/53/54/47	"A" Waste Blend Tank (process #633-460A); controlled by condenser (process #631-466A) to RCRA incinerators	condenser (process #631-466A) to RCRA incinerators
EU0121	PR-95/53/54/47	"B" Waste Blend Tank (process #633-460B)	condenser (process #631-466B) to RCRA incinerators
EU0122	PR-47	"C" Incinerator (process #633-223); 89.8 MMBtu/hr; Installed 1990, Mfr: Trane Thermal; Natural Gas	described in Statement of Basis
EU0123	PR-53	"A" Incinerator (process #633-005A); 74 MMBtu/hr; Installed 1975, Mfr: John Zink; Natural gas	described in Statement of Basis
EU0124	PR-54	"B" Incinerator (process #633-005B); 74 MMBtu/hr; Installed 1975, Mfr: John Zink; Natural Gas	described in Statement of Basis
EU0125	PR-95	Incinerator Emergency bypass	none

Central Treatment Systems			
EU#	**EP#**	**Process Description**	**Control Devices**
South Waste Management Area			
EU0126	TC-01/02/03/03A	Organic Waste Tank (process #633-001); 5,000 gallon capacity; installed 1991	Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)
EU0127	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003A); 200,000 gallon capacity; installed 1976/modified 1992	Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)
EU0128	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003B); 90,000 gallon capacity; installed 1978/modified 1995	Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)
EU0129	TC-01	"D" Incinerator (process #633-000); 54 MMBtu/hr; Installed 1976, Mfr:Trane; Natural Gas	described in Statement of Basis

Crop Protection Products			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0130	CPC-02	Solvent Storage Tank (process #110-023); 158,300 gallon capacity; Installed 1975-76	Chilled Water Condenser (process #631-303)
EU0131	CPC-06	Organic Premix Tank (process #180-118); 17,100 gallon capacity; Installed 1989	Chilled Water Condenser (process #631-304)
EU0132	CPC-07	Product Storage Tank (process #180-109); 1,713,000 gallon capacity; Installed 1975-76	Chilled Water Condenser (process #631-101)
EU0133	CPC-10	Active Ingredient Storage Tank (process #180-001); 49,500 gallon capacity; Installed 1975-76	none
EU0134	CPC-11	Product Storage Tank (process #180-112); 103,000 gallon capacity; Installed 1989	none
EU0135	CPC-12	Formulator C (process #180-122) Process Vessel	Chilled Water Condenser (process #631-305)
EU0136	CPC-13	Product Holding Tank (process #180-126) Process Vessel	Chilled Water Condenser (process #631-308)
EU0137	CPC-18	Loading for Bulk Trucks	none
EU0138	CPC-19	Formulator A (process #180-003A) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0139	CPC-20	Formulator B (process #180-003B) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0140	CPC-21	Hold Tank (process #180-006) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0141	CPC-21	Delivery Tank (process #180-044) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0142	CPC-24	Drum Filler (process #180-010)	none

Utilities Department			
EU#	EP#	Unit Description	Control Devices
Northeast Power			
EU0143	UTIL-70	Coal Bunkers	none
EU0144	UTIL-02	NEP Coal Fired Boiler #4	Electrostatic Precipitator
EU0145	UTIL-03	NEP Coal Fired Boiler #5	Electrostatic Precipitator
EU0146	UTIL-04	Ash Handling System	Baghouse
EU0147	UTIL-05	Ash Handling System	Baghouse
EU0148	no EP	Ash Silo (process #632-000)	Baghouse
East Utilities Boilers			
EU0149	UTIL-07	NG East Utilities Boiler #1	none
EU0150	UTIL-07	NG East Utilities Boiler #2	none
Water Treatment Lime Handling			
EU0151	UTIL-08	Lime Storage Bin	Baghouse
Cooling Towers			
EU0152	UTIL-27	Induced Draft Cooling Tower #5	none
EU0153	UTIL-35	Induced Draft Cooling Tower #3	none
EU0154	UTIL-62	Induced Draft Cooling Tower #6	none

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.

Pyrrole/MMPDC/320I Production Plant Emission Units without Limitations		
Point #	**Unit Description**	**Controls**
PY-01	Raw Material Section 110: Caustic Soda Storage Tank (NaOH & H2O) (process #110-024); 24,800 gallon capacity; Installed 1999; Vents to atmosphere	None
PY-02	Raw Material Section 110: 3-nitro-o-xylene (3-NOX) Storage Tank (process #110-040); 9,100 gallon capacity; Installed 1999; Vents to atmosphere	None
PY-10	Pesticides Manufacturing, Process Sampling Fugitives & Centrifuge Spot Ventilation	Inline Carbon Canister Absorber
PY-12	Raw Material Section 110: Sulfuric Acid Storage Tank (process #110-072); 8,600 gallon capacity; Installed 1999; vents to atmosphere	None

Thimet/Counter Emission Units Without Limitations		
Point #	**Unit Description**	**Controls**
TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: Ethyl Mercaptan Storage Tank, 30,600 gallon capacity, installed 1976.	Storage Seal Tank (process #631-006), Open Flare (process #631-012), Standby Flare (process #631-050), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: T-butyl Mercaptan Storage Tank, 30,600 gallon capacity, installed 1976.	
TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: Copper Naphthenate Storage Tank, 7,500 gallon capacity, installed 1976.	
TC01/TC-02/TC-03/TC-03A	Storage Seal Tank (process #631-006), 870 gallons, installed 1976.	
TC-05	Soda Ash Unloading (process #633-054)	none
TC-06	Caustic Storage Tank (process #110-001), 50,500 gallon capacity, installed 1976	
TC-08	Copper Solution Weigh Tank (process #140-027), 643 gallon capacity, installed 1976	
TC-09	Soda Ash Slurry Tank (process #633-055), 83,300 gallon capacity, installed 1976	
TC-10	0 Degree Brine Expansion Tank (Ethylene Glycol) (process #605-003), 50 gallons, 1976	
TC-11	20 Degree Brine Expansion Tank (Ethylene Glycol) (process #605-006), 625 gallons, 1976	
TC-12	Soft Water Storage Tank (process #110-017), 15,000 gallon capacity, installed 1976	
TC-13	Diesel Fuel Storage Tank (process #671-121) (process bldg), 300 gallon capacity, installed 1976	
TC-15	Mix Tank (process #633-006), 2000 gallons, 1976	
TC-16	Diesel Fuel Storage Tank (process #631-053) (TRANE), 500 gallon capacity, installed 1976	
TC-18	Propane Vaporizers: This is a back-up fuel source for the open and closed flares in case there is a natural gas outage/interruption.	

IMI-1 Emission Units without Limitations		
Point #	**Unit Description**	**Controls**
IMI-1 3	Acetic Anyhdride Storage Tank (process #110-001); 12,700 gallon capacity; Installed 1986	None
IMI-1 4	Sulfuric Acid Storage Tank (process# 110-025); 12,700 gallon capacity; Installed 1986	

IMI-2 Emission Units without Limitations		
Point #	**Unit Description**	**Controls**
IMI-2 2	Dichloromethane Storage Tank (process #110-014); 6,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-004)
no EP-no vent to atmosphere	Aqueous Ammonia Storage Tank (process #110-023X)	none
no EP-no vent to atmosphere	Anhydrous Ammonia Storage Tank (process #110-044X)	none

PROWL/SAR Plant Emission Units without Limitations		
Point #	**Unit Description**	**Controls**
PR-02	45% Potassium Hydroxide Tank (process #110-005); 20,000 gallon capacity	None
PR-03	20% Sodium Hydroxide Tank (process #110-008); 191,000 gallon capacity	None
PR-04	32% HCl Storage Tanks (2) (process #110-011 A/B); 25,000 gallon capacity each tank; installed 1993 [B tank is out of service]	None
PR-05	DEK Storage Tank (process #110-014); 210,000 gallon capacity; installed 1975-76	vent condenser (process #631-117)
PR-06	4-Nitro-o-xylene Storage Tank (140-032); 15,400 gallon capacity	None
PR-08	Nitric Acid Storage Tanks (2) (process #110-038A/B); 62,000 gallon capacity each tank; installed 1975-76	vapor return and conservation vent
PR-09	DEK Day Tank (process #200-018); 41,800 gallon capacity; installed 1975-76	vent condenser (process #631-111)
PR-11	98% Sulfuric Acid Storage (process #210-008); 31,600 gallon capacity	None
PR-12	Aqueous Recycle Box (process #002-018); contains low concentration of organics with VP<10 mm Hg @45C; capacity <50 gallons	None
PR-13	Mono-nitro-xylene (MNOx) Extraction/Purification (Washer #1 process #002-019); 352 gallon capacity process vessel; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	None
PR-14	Aqueous Recycle Box ; contains low concentration of organics with VP<10 mm Hg @45Cl; capacity <50 gallons	None
PR-15	Mono-nitro-xylene (MNOx) Extraction/Purification (Washer #1 process #002-021); 352 gallon capacity process vessel; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	None
PR-16	Demin/Recycle water tank (process #130-005); 530 gallon capacity; Contains traces amounts of o-xylene CAS 95476	None
PR-17	Mixed Mono-nitro-xylene (MNOx) storage tank (process #140-001); 23,800 gallon capacity	None
PR-18	4-Nitro-o-xylene Storage Tank (process #140-032); 15,400 gallon capacity	None
PR-19	3-Nitro-o-xylene Storage Tank (process #170-069); 7,500 gallon capacity	None
PR-20	Reductive Alkylation-Alkylation Seal Pot (process #150-004) for Reactors process #150-002A/B	None
PR-21	Reductive Alkylation-Alkylation Catch Tank Vent (process #150-030); 500 gallon capacity	None
PR-23	Catalyst Hopper (process #150-007A) & Catalyst Slurry Tanks (process #150-006A/B)	None
PR-24	Catalyst Hopper (process #150-007B)	None
PR-25	Purge Catalyst Scale Tank (process #150-008)	None
PR-27	Polishing Filter (process #150-029A/B) & Sample Return	None
PR-29	Crude Alkyl Xylidine Storage Tank (process #150-014)	None

PROWL/SAR Plant Emission Units without Limitations		
Point #	**Unit Description**	**Controls**
PR-30	Seal Pot Vent (process #150-018)	None
PR-31	Alkyl Product Storage Tank (process #150-021); 12,000 gallon capacity; currently out of service	None
PR-32	Acetone Storage Tank (process #150-038); 10,800 gallon capacity; (1978)	vent condenser (process #631-050)
PR-36	Alkyl Nitration Drain Tank (process #003-068); 4,600 gallon capacity [contains water only except in case of emergency reactor dump]	None
PR-39	Organic Waste Hold Tank (633-001); 38,600 gallon capacity	None
PR-47, PR-53, or PR-54	Strong Spent Acid Storage Tank (process #210-001)	RCRA Incinerators
PR-47, PR-53, or PR-54	Weak Spent Acid Storage Tank (process #170-070)	RCRA Incinerators
PR-43	98% Product Acid Tank (process #220-051)	None
PR-47, PR-53, or PR-54	Mixed Acid Storage Tanks (2) (process #120-007 & 120-009); 31,700 gallon capacity;each tank; Mix of nitric acid (CAS 7697-37-2), sulfuric acid (7664-93-9), water	RCRA Incinerators
PR-47, PR-53, or PR-54	Strong Spent Acid Storage Tank(process #220-V27)	RCRA Incinerators
PR-47, PR-53, or PR-54	Weak Spent Acid Storage Tank (process #220-V26)	RCRA Incinerators
PR-55	Plant Fume System Vent (vent to atmosphere) [Only Vents in Case of an SSM Event]	None
PR-63	Washed MNOX Storage Tank (process #140-101); 23,690 gallon capacity; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	None
PR-86	Ethylene Dichloride Railcar Unloading [Railcar Pressurized with Nitrogen]	None
PR-87	Diethyl Ketone Railcar Unloading [Railcar Pressurized with Nitrogen]	None
PR-88	o-Xylene Railcar Unloading [Railcar Pressurized with Nitrogen]	None
PR-89	32% Hydrochloric Acid Tank Trailer Unloading	None
PR-90	Alkyl Xylidine Storage tank (process #150-060); 120,000 gallon capacity	None

Central Treatment Systems Emission Units without Limitations		
EP#	**Process Description**	**Control Devices**
South Waste Management Area		
TC-02	Sulfite Oxidation Tower (process #633-019); treats effluent from the sulfur dioxide scrubbing system	none
TC-03	Closed Flare (process #633-050); backup for "D"	none
TC-03A	Open Flare (process #631-012); backup for closed flare	none

Crop Protection Products Emission Units without Limitations		
EP#	**Process Description**	**Control Devices**
CPC-01	Active Ingredient Storage Tank (process #110-113); 30,400 gallon capacity; Installed 1989	none
CPC-03	Solvent Storage Tank (process #110-131); 30,500 gallon capacity; Installed 1989	none
CPC-04	Emulsifier Storage Tank (process #110-117); 30,400 gallon capacity; Installed 1989	none
CPC-05	Active Ingredient Storage Tank (process #110-125); 51,900 gallon capacity; Installed 1989	none
CPC-08	Emulsifier Storage Tank (process #110-029); 24,200 gallon capacity; Installed 1975-76	Chilled Water Condenser (process #631-025)
CPC-09	Emulsifier Storage Tank (process #110-032); 24,200 gallon capacity; Installed 1975-76	Chilled Water Condenser (process #631-026)
CPC-14	Product Storage Tank (process #110-101); 51,300 gallon capacity; Installed 1989	none
CPC-15	Product Storage Tank (process #110-105); 25,100 gallon capacity; Installed 1989	none
CPC-16	Product Storage Tank (process #110-109); 52,500 gallon capacity; Installed 1989	none
CPC-17	Filter Drain Drum (process #180-139) - Salvage Drum, 55 gallon	none
CPC-29	Filler (Serac) (process #180-108)	none
CPC-29	Filler (Mini Bulk) (process #210-008)	none
CPC-30	Aqueous Waste (process # 633-007) - Process Vess	none
CPC-31	Fragrance Storage Tank (process #180-050); 7,200 gallon capacity; Installed 1998	none
CPC-32	Blend Tank (process #180-040) - Process Vessel, 2,900 gallon capacity	none
CPC-32	Process Equipment, Drum Filler for 55 Gal Drums, (process #180-010)	none

Services Department		
EP#	Unit Description	Controls
SV-01	Storage Tank (process #004-572); 56% Nitric Acid ; 287 gallon capacity	none
SV-02	Storage Tank D-1; Diesel fuel; 1,000 gallon capacity; installed 1989	none
SV-03	Storage Tank G-1; Unleaded Gasoline; 1,000 gallon capacity; installed 1989	none
SV-04	Storage Tank G-2; Unleaded Gasoline; 1,000 gallon capacity; installed 1989	none

Utilities Department		
EP#	Unit Description	Controls
Northeast Power		
UTIL-01	Coal Storage Pile	none
no EP	Inclined Conveyor	none
no EP	Vertical Bucket Conveyor	none
no EP	Horizontal Conveyor	none
UTIL-15	Boiler Feed Treatment Mixture Storage	none
UTIL-16	Optimeen Tote tank; 300 gallon capacity	none
UTIL-17	Sulfuric Acid Storage Tank	none
UTIL-25	Optimeen Tote tank; 300 gallon capacity	none
UTIL-26	Boiler Feed Treatment Mixture Storage	none
UTIL-30	Corrosion Inhibitor	none
UTIL-38	Corrosion Inhibitor	none
UTIL-39	Boiler Feed Treatment Mixture Storage	none
UTIL-40	Sulfuric Acid Storage Tank	none
UTIL-45	Fuel Oil #2 Storage Tank; 700 gallon capacity	none
UTIL-55	Sludge Treatment Polymer Storage Tank; 1,000 gallon capacity	none
East Utilities Boilers		
UTIL-06	#6 Fuel Oil Storage Tank; 50,000 gallon capacity; installed 1976, currently out of service	none
UTIL-06	#6 Fuel Oil Storage Tank ;66,000 gallon capacity; installed 1976; currently out of service	none
Water Treatment Lime Handling		
UTIL-09	Lime/Water Slurry Storage Tank (to water treatment system Gyrazur)	none
UTIL-WW	Biological Wastewater Treatment System	none
Nitrogen Plant		
UTIL-60	Air Dryer	none
UTIL-61	Pressure Swing Adsorption Towers	none

DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

1. Construction Permit 0997-003
2. Construction Permit 062000-019, and amendments A and B
3. Construction Permit 022006-005
4. Construction Permit 102008-001
5. Construction Permit 092009-005
6. Construction Permit 102009-007
7. 40 CFR Part 63, Subpart EEE – National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors Notice of Compliance dated April 26, 2004, approved
8. Incinerators A, B, C and D Startup, Shutdown and Malfunction Plan

Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (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.

There are no limitations that apply to the BASF installation as a single unit.

Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (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.

Pyrrole/MMPDC/320I Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0001a	PY-04	Pesticides Manufacturing Building Vents	None
EU0001	None	Heat Exchanger (process #631-035)	None
EU0002	PY-06	Process Section 180: Batch Product Dryer (process #180-029); Installed 1999	Scrubber (process #631-206/207/210), Thermal Oxidizer (process #631-401), Scrubber (631-402)
EU0003	PY-06	Process Section 120: Reactor (process #120-001); Installed 1999	
EU0004	PY-06	Process Section 130: Reactor (process #130-151); Installed 1999	
EU0005	PY-06	Process Section 140: Reactor (process #140-001); Installed 1999	
EU0006	PY-06	Process Section 150: Reactor (process #150-001); Installed 1999	
EU0007	PY-06	Process Section 150: Reactor (process #150-031); Installed 1999	
EU0008	PY-06	Process Section 150: Reactor (process #150-005); Installed 1999	
EU0009	PY-06	Process Section 150: Process Tank (process #150-043); 900 gallon capacity; Installed 1999	
EU0010	PY-06	Process Section 160: Reactor (process #160-001); Installed 1999	
EU0011	PY-06	Process Section 160: Wet Xylene for Pyrrole/MMPDC production/Acetic Acid for 320 I Tank (process #160-007); 11,000 gallon capacity; Installed 1999	
EU0012	PY-06	Process Section 170: Centrifuges (process # 170-004 A/B); Installed 1999	
EU0013	PY-06	Process Section 170: Process Tank (process #170-003); 1,500 gallon capacity; Installed 1999	
EU0014	PY-06	Process Section 170: Centrifuge Feed Tank (process #170-001); 12,000 gallon capacity; Installed 1999	
EU0015	PY-06	Process Section 170: Mother Liquor Tank (process #170-005); 14,000 gallon capacity; Installed 1999	
EU0016	PY-06	Process Section 190: Reactor (process #190-001); Installed 1999	
EU0017	PY-06	Process Section 200: Reactor (process #200-001); Installed 1999	
EU0018	PY-06	Process Section 220: Reactor (process #220-001); Installed 1999	
EU0019	PY-06	Raw Material Section 110: Triethylamine Storage Tank (process #110-007); 27,900 gallon capacity; Installed 1999	
EU0020	PY-06	Raw Material Section 110:Methanol/IPA Storage Tank (process #110-021); 27,900 gallon capacity; Installed 1999	
EU0021	PY-06	Raw Material Section 110:Toluene/Xylene Storage Tank (process #110-034); 27,900 gallon capacity; Installed 1999	
EU0022	PY-07	Emergency bypass for Thermal Oxidizer seal pot from PY-06; vents to atmosphere	None
EU0023	PY-06	Waste Storage Section 633: Acidic Aqueous Storage Tank (process #633-006); 11,600 gallon capacity; Installed 1999	Scrubber (process #631-206/207/210), Thermal Oxidizer (process #631-401), Scrubber (631-402)
EU0024	PY-06	Waste Storage Section 633: Basic Waste Hold Tank (process #633-001); 36,200 gallon capacity; Installed 1999	
EU0025	PY-06	Waste Storage Section 633: Organic Waste Hold Tank (process #633-004); 34,200 gallon capacity; Installed 1999	
EU0026	PY-08	Waste Storage Section 633: Floor Drain Hold Tank (process #633-012); 7,800 gallon capacity; Installed 1999	Voluntary Carbon Canister
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank (process #633-401); 24,800 gallon capacity; Installed 1999	RCRA Incinerators
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank (process #633-421); 14,000 gallon capacity; Installed 1999	RCRA Incinerators

Pyrrole/MMPDC/320I Production Plant			
EU0029	PY-03	Dry Material Unloading; Installed 1999; Baghouse (process #631-002) & voluntary HEPA filter	Required Baghouse (process #631-002) & required HEPA filter
EU0030	PY-05	Process Section 180: Product Supersack Filler (process #180-008); Installed 1999	Required Baghouse (process #631-015) & required HEPA filter
EU0031	PY-05	Process Section 180: Swivel Drum Filler (process #180-027); Installed 1999	Required Baghouse (process #631-015) & required HEPA filter
EU0032	PY-06	Product Transfer System (pneumatic conveying system); Installed 1999	Scrubber (process #631-206/207/210), Thermal Oxidizer (process #631-401), Scrubber (631-402)
EU0033	PY-06	Process Section 140: Chlorobenzene/Acetonitrile Storage Tank (process #140-011); stores Cyclohexane for 320I production; 11,500 gallon capacity; Installed 1999	
EU0034	PY-06	Process Section 150: Benzoic sack unloading station (process #150-070); Installed 1999	
EU0035	PY-06	Process Section 150: 80% N2H4 tank (process #150-046); 9,000 gallon capacity; Installed 1999	
EU0036	PY-06	Process Section 210: 320I Nitrile Tank (process #210-005); 6,000 gallon capacity; Installed 1999	
EU0037	PY-06	Raw Material Section 110: Dimethylformamide Storage Tank (process #110-012); 12,000 gallon capacity; Installed 1999	
EU0038	PY-06	Raw Material Section 110: Sodium Methoxide/Methanol for MMPDC /Diethoxymethane for Pyrrole/320 I Ester Storage Tank (process #110-015); 11,700 gallon capacity; Installed 1999	
EU0039	PY-06	Raw Material Section 110: Chlorobenzene/ Acetonitrile Storage Tank (process #110-031); 12,400 gallon capacity; Installed 1999	
EU0040	PY-06	Raw Material Section 110: Trimethylamine Storage Tank (process #110-074); 10,000 gallon capacity; Installed 1999	
EU0041	PY-06	Raw Material Section 110: Tetrahydrofuran Storage Tank (process #110-078); 11,700 gallon capacity; Installed 1999	
EU0042	PY-09	Raw Material Section 110 Tank Farm: Bromine Tank (process #110-010); 4,000 gallon capacity, Installed 1999	Caustic Scrubber (process #631-063)
EU0043	PY-09	Raw Material Section 110 Tank Farm: Phosphorus Chloride Tank (process #110-001); 6,000 gallon capacity; Installed 1999	
EU0044	PY-09	Raw Material Section 110 Tank Farm:Phosphorus Oxychloride Tank (process #110-018); 7,500 gallon capacity; Installed 1999	
EU0045	PY-09	Raw Material Section 110 Tank Farm: Trifluroacetyl Chloride (process #110-060); 6,000 gallon capacity; Installed 1999	
EU0046	PY-09	Raw Material Section 110 Tank Farm: Chlorine Cylinders	
EU0047	PY-11	Raw Materials Handling System: Dry Material Unloading; Installed 1999	Required Baghouse (process #140-046) & required HEPA filter
EU0048	PY-14	Raw Materials Handling System: Dry Material Unloading; Installed 1999	Required Baghouse (process #631-073) & required HEPA filter
EU0049	PY-15	Raw Materials Handling System: Dry Material Unloading; Installed 1999	Required Baghouse (process #631-070) & required HEPA filter
EU0050	PY-16	Raw Materials Handling System: Potassium methoxide receiving; Installed 2006	Scrubber (process #631-080)

PERMIT CONDITION (EU0001a through EU0028)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM. The individual requirements for each type of equipment is detailed in following Permit Conditions.

General Conditions:

Emission Limitations/Operating Limitations:

(a) On and after December 23, 2003, the permittee of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in §63.1363, as summarized in Table 2 to Subpart MMM of Part 63. [§63.1362(a)]

(b) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions regarding construction and reconstruction in §63.5 of subpart A of this part. [§63.1367(a)(5)]

(c) Opening of a safety device. Opening of a safety device, as defined in §63.1361, is allowed at any time conditions require it to avoid unsafe conditions. [§63.1362(i)]

(d) Closed-vent systems. The permittee of a 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 §63.1362(b) through (d) shall comply with the requirements of Table 3 of this subpart and paragraph §63.1362(j)(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. [§63.1362(j)]

  (1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in §63.1367(f)(1). 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 [§63.1362(j)(1)]

  (2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in §63.1367(f)(2). [§63.1362(j)(2)]

Recordkeeping:

(a) The permittee shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in §63.1367(a)(1) through (5). [§63.1367(a)]

  (1) The permittee of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part. [§63.1367(a)(1)]

Reporting:

(a) The permittee shall comply with the reporting requirements of this section. The permittee shall also comply with applicable paragraphs of §§63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart. [§63.1368(a)]

(b) The permittee who is subject to §63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to these standards. The application shall be prepared in accordance with §63.5(d) of subpart A of this part. [§63.1368(c)]

***Startup, Shutdown, Malfunction*:**

SSM Plan:

The permittee shall develop a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The permittee of an affected source shall keep the current and superseded versions of this plan onsite, as specified in §63.6(e)(3)(v) of subpart A of this part. The permittee shall keep the startup, shutdown, and malfunction records specified in paragraphs §63.1367(a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in §63.1368(i). [§63.1367(a)(3)]

(i) The permittee shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with subpart MMM of this part, as specified in §63.6(e)(3)(iii). [§63.1367(a)(3)(i)]

(ii) The permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subpart MMM of this part. [§63.1367(a)(3)(ii)]

(iii) For each startup, shutdown, or malfunction, the permittee shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in §63.6(e)(3)(iii) of subpart A of this part; alternatively, the permittee shall record any actions taken that are not consistent with the plan, as specified in §63.6(e)(3)(iv) of subpart A of this part. [§63.1367(a)(3)(iii)]

Reporting:

For the purposes of subpart MMM of this part, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under §63.1368(g) instead of the schedule specified in §63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in §63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the permittee or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time the permittee takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee shall submit an immediate startup, shutdown, and malfunction report as specified in §63.10(d)(5)(ii) of subpart A of this part. [§63.1368(i)]

PERMIT CONDITION (EU0001a through EU0028)-002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM.

Standards for Equipment Leaks:

Emission Limitation/Monitoring-General Equipment Leaks:

(a) General equipment leak requirements. [§63.1363(a)]

(1) The provisions of this section apply to “equipment” as defined in §63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section. [§63.1363(a)(1)]

(2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: [§63.1363(a)(2)]
   (i) 40 CFR Part 60. [§63.1363(a)(2)(i)]
   (ii) 40 CFR Part 61. [§63.1363(a)(2)(ii)]
(3) The provisions in §63.1(a)(3) of subpart A of this part do not alter the provisions in §63.1363(a)(2). [§63.1363(a)(4)]
(4) Lines and equipment not containing process fluids are not subject to the provisions of §63.1363. 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. [§63.1363(a)(5)]
(5) The provisions of §63.1363 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 this subpart MMM. [§63.1363(a)(6)]
(6) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. 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 15 calendar days of the end of each monitoring period for that component. [§63.1363(a)(7)]
(7) Equipment that is in vacuum service is excluded from the requirements of this section. [§63.1363(a)(8)]
(8) 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 this section if it is identified as required in §63.1363(g)(9). [§63.1363(a)(9)]
(9) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c) of subpart H of this part, the following requirements apply: [§63.1363(a)(10)]
   (i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1363(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 §63.1363(e)(7)(iii), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply with §63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring. [§63.1363(a)(10)(ii)]
   (iii) The identification on equipment, except as specified in §63.1363(a)(10)(ii), may be removed after it has been repaired. [§63.1363(a)(10)(iii)]

(b) The permittee shall comply with the provisions of subpart H of this part as presented below. When the term “process unit” is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes. [§63.1363(b)]

Standards: Compressors.

(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 §63.1363(a) of this subpart 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)]
   (i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]
   (ii) 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 §63.1362; or [§63.164(b)(2)]
   (iii) 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)]
(5) Seal systems [§63.164(e)]
   (i) 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)]
   (ii) 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)]
(6) 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)]
(7) Leak repair [§63.164(g)]
   (i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.164(g)(1)]
   (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.164(g)(2)]
(8) 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 §63.1362 of this subpart. [§63.164(h)]
(9) Any compressor that is designated, as described in §63.1363(g), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i) and §63.1363(b)(1)(vii)]
   (i) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and [§63.164(i)(1)]
   (ii) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Administrator. [§63.164(i)(2)]

Standards: 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 parts per million above background except as provided in §63.165(b), as measured by the method specified in §63.180(c) of this subpart. [§63.165(a)]
(2) Pressure releases [§63.165(b)]
   (i) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each

pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(b)(1)]

(ii) No later than 5 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 parts per million above background, as measured by the method specified in §63.180(c) of this subpart. [§63.165(b)(2)]

(3) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.1362 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]

(4) Rupture disks [§63.165(d)]

(i) 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)]

(ii) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(d)(2)]

Standards: 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 §63.1363(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a) and §63.1363(b)(1)(i)]

(2) Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]

(i) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]

(ii) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]

(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.1362; or [§63.166(b)(3)]

(iv) 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)]

(A) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]

(C) 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: 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 5 calendar days by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), 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), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.169(a)]

(2) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]

(3) Leaks [§63.169(c)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.169(c)(1)]

(ii) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.169(c)(2)]

(iii) 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)]

(4) First attempts at repair include, but are not limited to, the practices described under §§63.1363(c) and 63.1363(e) of this subpart, for pumps and valves, respectively. [§63.169(d), §63.1363(b)(1)(iii), and §63.1363(b)(1)(v)]

Standards: Delay of repair.

(1) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist: [§63.1363(b)(3)(i)]

(i) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1363(b)(3)(i)(A)]

(ii) 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. [§63.1363(b)(3)(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)]

(i) 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)]

(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.1362. [§63.171(c)(2)]

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [§63.171(e)]

Standards: Closed-vent systems and control devices.

(1) Permittees of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]

(2) 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)]

(i) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]

(ii) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172 (f)(2)(i)]

(B) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]

(3) Each closed-vent system shall be inspected according to the procedures in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.172(g)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i) of this section. [§63.172(h)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.172(h)(1)]

(ii) 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)]

(5) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the 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 process unit shutdown. [§63.172(i)]

(6) 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)]

(i) 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) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]

(ii) 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)]

(iii) 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)]

(7) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. [§63.172(m)]

(8) After the compliance dates specified in §63.100 of subpart F of this part, the permittee of any control device subject to this subpart 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 this subpart, 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 this subpart. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1363(h). [§63.172(n)]

Standards: Connectors in gas/vapor service and in light liquid service.

(1) The permittee of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1363(a) and §63.1363(f) of this subpart , at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(a) and §63.1363(b)(1)(i)]

(i) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v). [§63.174(a)(1)]

(ii) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. [§63.174(a)(2)]

(2) The permittee shall monitor for leaks at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(b) and §63.1363(b)(3)(iii)(A)]

(i) 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. [§63.1363(b)(3)(iii)(C)]

(ii) 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 last required monitoring period, monitoring shall be performed once every 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period. [§63.1363(b)(3)(iii)(D)]

(iii) The permittee shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in §63.1363(b)(3)(iii)(D), the first 4 years specified in §63.1363(b)(3)(iii)(G), or the entire 8 years specified in §63.1363(b)(3)(iii)(G). At the end of that 2-year monitoring period, the permittee shall monitor once per year while the percent leaking connectors

is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the permittee may again elect to monitor in accordance with §63.1363(b)(3)(iii)(D) or (G), as applicable. [§63.1363(b)(3)(iii)(E)]

(iv) If the permittee complying with the requirements of §63.1363(b)(3)(iii)(D) or (G) for a group of processes determines that 1 percent or greater of the connectors are leaking, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of §63.1363(b)(3)(iii)(D) or (G) after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking. [§63.1363(b)(3)(iii)(F)]

(v) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 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 §63.1363(b)(3)(iii)(D), (E), or (F). [§63.1363(b)(3)(iii)(G)]

(3) Connectors

(i) Open connectors

(A) 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 3 months after being returned to organic hazardous air pollutants 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)]

(B) As an alternative to the requirements in §63.174(c)(1)(i), a 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 §63.1363(b)(3)(iii)(C) through (G), 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)]

(C) A permittee may switch alternatives described in §63.174(c)(1) (i) and (ii) at the end of the current monitoring period he is in, provided that it is reported as required in §63.1363(h) of this subpart 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) and §63.1363(b)(1)(viii)]

(ii) As an alternative to the requirements of §63.1363(b)(3)(iii)(C) through (G), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in §63.174(c)(2)(iv) may: [§63.174(c)(2)]

(A) Comply with the requirements of §63.169 of this subpart, and [§63.174(c)(2)(i)]

(B) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d). [§63.174(c)(2)(ii)]

(C) The provisions of §63.174(c)(2) apply to screwed connectors installed before November 10, 1997. [§63.174(c)(2)(iv)]

(4) 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 §63.1363(f) and in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [§63.174(d)]

(5) For use in determining the monitoring frequency, as specified in §63.1363(b)(3)(iii)(C) through (G), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]

(i) For the first monitoring period, use the following equation: [§63.174(i)(1)]

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

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

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

C_C = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then C_C = 0.

(ii) For subsequent monitoring periods, use the following equation: [§63.174(i)(2)]

$$\%C_L = \left[\frac{(C_L - C_{AN})}{(C_t + C_c)}\right] \times 100$$

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1363(b)(3)(iii)(C) through (G) and §63.174 (c), not to exceed 2 percent of the total connector population, C_t.

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

C_C = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then C_C = 0.

(6) Optional credit for removed connectors. If a permittee eliminates a connector subject to monitoring under §63.1363(b)(3)(iii)(C) through (G), 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). [§63.174(j)]
   (i) The connector was welded after November 10, 1997. [§63.174(j)(1)]
   (ii) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]
   (iii) Welds created after November 10, 1997, but before June 23, 1999, are monitored or tested by 3 months after December 23, 2003. [§63.174(j)(3)]
   (iv) Welds created after June 23, 1999 are monitored or tested within 3 months after being welded. [§63.174(j)(4)]
   (v) 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 this subpart. [§63.174(j)(5)]

Alternative means of emission limitation: Batch processes.

(1) As an alternative to complying with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b), § 63.171, and §63.174, the permittee of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in §63.178(b) and (c), with the differences specified in §63.1363(b)(3)(iv), or the permittee may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The permittee may switch among the alternatives provided the change is documented as specified in §63.1363(g). [§63.178(a)]

(2) The following requirements shall be met if a permittee elects to use pressure testing of process equipment to demonstrate compliance with this subpart. A permittee who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.1363(c), §63.1363(e), and §63.169 of this subpart. [§63.178(b)]
   (i) Each time equipment is reconfigured for production of a different product or intermediate, the process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service. [§63.178(b)(1)]
      (A) When the process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment. [§63.178(b)(1)(i)]
      (B) Each process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year. [§63.178(b)(1)(ii)]
      (C) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate. [§63.178(b)(1)(iii)]
   (ii) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart. [§63.178(b)(2)]
   (iii) Pressure tests
      (A) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss. [§63.178(b)(3)(i)]

(B) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss. [§63.178(b)(3)(ii)]

(iv) Leaks

(A) If a leak is detected, it shall be repaired and the process equipment shall be retested before start-up of the process. [§63.178(b)(4)(i)]

(B) If a process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in §63.178(d) are met. [§63.178(b)(4)(ii)]

(3) The following requirements shall be met if a permittee elects to monitor the equipment to detect leaks by the method specified in §63.180(b), with the differences specified in §63.180(b)(3)(v), of this subpart to demonstrate compliance with this subpart. [§63.178(c)]

(i) The permittee shall comply with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b),, and §§63.172 through 63.174 of this subpart. [§63.178(c)(1)]

(ii) The equipment shall be monitored for leaks by the method specified in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.178(c)(2)]

(iii) The equipment shall be monitored for leaks as specified below: [§63.178(c)(3)]

(A) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit. [§63.178(c)(3)(i)]

(B) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart. [§63.178(c)(3)(ii)]

(C) Equipment other than connectors shall be monitored quarterly. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating. [§63.178(c)(3)(iii) and §63.1363(b)(3)(iv)(B)]

(D) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. A permittee may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating. [§63.178(c)(3)(iv)]

(iv) If 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 §63.178(d). [§63.178(c)(4)]

(4) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met: [§63.178(d)]

(i) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted. [§63.178(d)(1)]

(ii) The repair is made no later than 10 calendar days after delivery of the replacement equipment. [§63.178(d)(2)]

(c) **Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1363(c)]**

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service. [§63.1363(c)(1)]

(2) Monitoring [§63.1363(c)(2)]

(i) Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in §63.180(b), except as provided in §63.1363(f), and §63.1363(c)(5) through (9). [§63.1363(c)(2)(i)]

(ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b) of subpart H of this part, that defines a leak is: [§63.1363(c)(2)(ii)]

(A) For agitators, an instrument reading of 10,000 parts per million or greater. [§63.1363(c)(2)(ii)(A)]

(B) For pumps, an instrument reading of 2,000 parts per million or greater. [§63.1363(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 seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1363(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1363(c)(2)(iii)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(2)(iii)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(2)(iii)(B)]

(3) Repair provisions. [§63.1363(c)(3)]

(i) When a leak is detected pursuant to §63.1363(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 §63.1363(b)(3)(i). [§63.1363(c)(3)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(c)(3)(ii)]

(A) Tightening of packing gland nuts. [§63.1363(c)(3)(ii)(A)]

(B) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1363(c)(3)(ii)(B)]

(4) Calculation of percent leakers. [§63.1363(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. [§63.1363(c)(4)(i)]

(ii) If, calculated on a 1–year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the permittee shall monitor each pump once per month, until the calculated 1–year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps). [§63.1363(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

1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1363(c)(4)(iii)]

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart: [§63.1363(c)(4)(iv)]

$$\% \ P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)}\right] \times 100$$

Where: $\% P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in §63.1363(c)(2)(i) and (ii)

P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1363(c)(5) and (6).

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in §63.1363(c)(5)(i) through (vii) is exempt from the requirements of §63.1363(c)(1) through (c)(4)(iii), except as specified in §63.1363(c)(5)(iv)(A) and (vii). [§63.1363(c)(5)]

(i) Each dual mechanical seal system is: [§63.1363(c)(5)(i)]

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1363(c)(5)(i)(A)]

(B) 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 §63.1363(b)(3)(ii); or [§63.1363(c)(5)(i)(B)]

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1363(c)(5)(i)(C)]

(ii) The barrier fluid is not in light liquid service. [§63.1363(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. [§63.1363(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 §63.1363(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1363(c)(5)(iv)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(5)(iv)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(5)(iv)(B)]

(v) Each sensor as described in §63.1363(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. [§63.1363(c)(5)(v)]

(vi) Drips [§63.1363(c)(5)(vi)]

(A) 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. [§63.1363(c)(5)(vi)(A)]

(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1363(c)(5)(vi)(A), or if, based on the criteria established in §63.1363(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1363(c)(5)(vi)(B)]

(vii) When a leak is detected pursuant to §63.1363(c)(5)(iv)(A) or (vi)(B), the leak must be repaired as specified in §63.1363(c)(3). [§63.1363(c)(5)(vii)]

(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1363(c)(1) through (3). [§63.1363(c)(6)]

(7) 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 §63.1363(b)(3)(ii) is exempt from the requirements of §63.1363(c)(2) through (5). [§63.1363(c)(7)]

(8) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1363(c)(5) or (6), the group of processes is exempt from the requirements of §63.1363(c)(4). [§63.1363(c)(9)]

(d) **Standards: open-ended valves or lines. [§63.1363(d)]**

(1) Open ended valves or lines [§63.1363(d)(1)]

(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.1363(d)(4) through (6). [§63.1363(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 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. [§63.1363(d)(1)(ii)]

(2) 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. [§63.1363(d)(2)]

(3) 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 §63.1363(d)(1) at all other times. [§63.1363(d)(3)]

(4) 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 §63.1363(d)(1) through (3). [§63.1363(d)(4)]

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(5)]

(6) 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 §63.1363(d)(1) through (3) are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(6)]

(e) **Standards: valves in gas/vapor service and in light liquid service. [§63.1363(e)]**

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. [§63.1363(e)(1)]

(2) For existing affected sources, all valves subject to this section shall be monitored, except as provided in §63.1363(f) by no later than 1 year after December 23, 2003. [§63.1363(e)(2)]

(3) Monitoring. The permittee of a source subject to this section shall monitor all valves, except as provided in §63.1363(f), at the intervals specified in §63.1363(e)(4) and shall comply with all other provisions of this section, except as provided in §63.1363(b)(3)(i). [§63.1363(e)(3)]
   (i) The valves shall be monitored to detect leaks by the method specified in §63.180(b) of subpart H of this part. [§63.1363(e)(3)(i)]
   (ii) An instrument reading of 500 parts per million or greater defines a leak. [§63.1363(e)(3)(ii)]

(4) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1363(e)(2) the permittee shall monitor valves for leaks at the intervals specified below: [§63.1363(e)(4)]
   (i) For a group of processes with 2 percent or greater leaking valves, calculated according to §63.1363(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1363(e)(9). [§63.1363(e)(4)(i)]
   (ii) For a group of processes with less than 2 percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1363(e)(4)(iii) through (v). [§63.1363(e)(4)(ii)]
   (iii) For a group of processes with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters. [§63.1363(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 4 quarters. [§63.1363(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 2 years. [§63.1363(e)(4)(v)]

(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1363(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1363(e)(5)(i) through (viii) apply. [§63.1363(e)(5)]
   (i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to §63.1363(e)(3)(i) and (ii) and as calculated according to §63.1363(e)(6)(ii) and (iii). [§63.1363(e)(5)(i)]
   (ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1363(e)(5)(ii) (A) through (C). [§63.1363(e)(5)(ii)]
      (A) The permittee shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained. [§63.1363(e)(5)(ii)(A)]
      (B) 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 must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1363(e)(5)(ii)(B)]
      (C) 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. [§63.1363(e)(5)(ii)(C)]

(iii) The permittee shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 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 2 percent leaking valves or greater, the permittee shall revert to the program required in §63.1363(e)(2) through (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 Equation 4 of this subpart: [§63.1363(e)(5)(iii)]

$$\% \ V_{LO} = \frac{\sum_{i=1}^{n}\left(\% \ V_{Li} \times V_i\right)}{\sum_{i=1}^{n} V_i}$$

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

$\% \ V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1363(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i

n = number of subgroups

(iv) Records. In addition to records required by §63.1363(g), the permittee shall maintain records specified in §63.1363(e)(5)(iv)(A) through (D). [§63.1363(e)(5)(iv)]

(A) Which valves are assigned to each subgroup, [§63.1363(e)(5)(iv)(A)]

(B) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1363(e)(5)(iv)(B)]

(C) Which valves are reassigned and when they were reassigned, and [§63.1363(e)(5)(iv)(C)]

(D) The results of the semiannual overall performance calculation required in §63.1363(e)(5)(iii). [§63.1363(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. [§63.1363(e)(5)(v)]

(vi) Semiannual reports. In addition to the information required by §63.1363(h)(3), the permittee shall submit in the Periodic reports the information specified in §63.1363(e)(5)(vi) (A) and (B). [§63.1363(e)(5)(vi)]

(A) Valve reassignments occurring during the reporting period, and [§63.1363(e)(5)(vi)(A)]

(B) Results of the semiannual overall performance calculation required by §63.1363(e)(5)(iii). [§63.1363(e)(5)(vi)(B)]

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1363(e)(6)(iii) shall be used. [§63.1363(e)(5)(vii)]

(viii) Except for the overall performance calculations required by §63.1363(e)(5)(i) and (iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section. [§63.1363(e)(5)(viii)]

(6) Percentage Calculations [§63.1363(e)(6)]

(i) The permittee shall decide no later than the implementation date of this subpart 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. [§63.1363(e)(6)(i)]

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: [§63.1363(e)(6)(ii)]

$$\% \ V_L = \left[\frac{V_L}{V_T}\right] \times 100$$

Where: $\% \ V_L$ = percent leaking valves

V_L = number of valves found leaking excluding nonrepairables as provided in §63.1363(e)(6)(iv)(A)

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1363(e)(7)(iii)

(iii) 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 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1363(e)(6)(iii)]

(iv) Nonrepairable valves [§63.1363(e)(6)(iv)]

(A) 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 §63.1363(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 1 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. [§63.1363(e)(6)(iv)(A)]

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1363(e)(6)(iv)(B)]

(7) Repair provisions. [§63.1363(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 §63.1363(b)(3)(i). [§63.1363(e)(7)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.1363(e)(7)(ii)]

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-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." [§63.1363(e)(7)(iii)]

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking. [§63.1363(e)(7)(iii)(A)]

(B) Periodic monitoring required by §63.1363(e)(2) through (4) may be used to satisfy the requirements of §63.1363(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1363(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1363(e)(7)(iii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1363(e)(7)(iii). [§63.1363(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to §63.1363(e)(7)(iii), the permittee shall follow the provisions of §63.1363(e)(7)(iii)(C)(*1*) and (*2*) to determine whether that valve must be counted as a leaking valve for purposes of §63.1363(e)(6). [§63.1363(e)(7)(iii)(C)]

(*1*) If the permittee elects to use periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1363(e)(7)(iii)(C)(1)]

(*2*) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(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. [§63.1363(e)(7)(iii)(C)(2)]

(8) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(e)(8)]

(i) Tightening of bonnet bolts, [§63.1363(e)(8)(i)]

(ii) Replacement of bonnet bolts, [§63.1363(e)(8)(ii)]

(iii) Tightening of packing gland nuts, and [§63.1363(e)(8)(iii)]

(iv) Injection of lubricant into lubricated packing. [§63.1363(e)(8)(iv)]

(9) 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 §63.1363(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1363(e)(4)(iii), (iv), or (v), except as provided in §63.1363(f). [§63.1363(e)(9)]

(f) **Unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [§63.1363(f)]**

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in §63.1363(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1363(f)(2), (3), or (4), as applicable. All equipment, except connectors that meet the requirements in §63.1363(f)(4), must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1363(f)(1)]

(i) For pumps and agitators, §63.1363(c)(2), (3), and (4) do not apply. [§63.1363(f)(1)(i)]

(ii) For valves, §63.1363(e)(2) through (7) do not apply. [§63.1363(f)(1)(ii)]
(iii) For connectors, §63.174(b) through (e) and §63.1363(b)(3)(iii)(C) through (G) do not apply. [§63.1363(f)(1)(iii)]
(iv) For closed-vent systems, §63.172(f)(1), (f)(2), and (g) do not apply. [§63.1363(f)(1)(iv)]

(2) Equipment that is unsafe-to-monitor. [§63.1363(f)(2)]
(i) Valves, connectors, agitators, and any part of closed-vent systems 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 identified in §63.1363(f)(1)(i) through (iii), or the inspection requirements identified in §63.1363(f)(1)(iv). [§63.1363(f)(2)(i)]
(ii) The permittee of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed vent systems, inspections shall not be more frequent than annually. [§63.1363(f)(2)(ii)]

(3) Equipment that is difficult-to-monitor. [§63.1363(f)(3)]
(i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the permittee determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service; [§63.1363(f)(3)(i)]
(ii) The permittee of valves, agitators, or pumps designated as difficult-to-monitor must 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-monitor, the permittee must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [§63.1363(f)(3)(iii)]

(4) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1363(f)(4)]
(i) A connector may be designated as inaccessible if it is: [§63.1363(f)(4)(i)]
(A) Buried; [§63.1363(f)(4)(i)(A)]
(B) Insulated in a manner that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(B)]
(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(C)]
(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or [§63.1363(f)(4)(i)(D)]
(E) 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. [§63.1363(f)(4)(i)(E)]

(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [§63.1363(f)(4)(i)(F)]

(ii) 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 §63.1363(b)(3)(i). [§63.1363(f)(4)(iii)]

(iii) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1363(g) and (h). [§63.1363(f)(4)(iv)]

Emission Limitation/Monitoring-Vapor Suppression Equipment [§63.1366(h)]:

(a) Leak inspection provisions for vapor suppression equipment. [§63.1366(h)]

(1) Except as provided in §63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the permittee shall comply with the requirements of §63.1366(h)(2) through (8). [§63.1366(h)(1)]

(2) Except as provided in §63.1366(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(i) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(iii). [§63.1366(h)(2)]

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1366(h)(2)(i)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(i)(A)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(i)(B)]

(ii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1366(h)(2)(iii)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(iii)(A)]

(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(iii)(B)]

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1366(h)(3)(i) through (vi). [§63.1366(h)(3)]

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, appendix A. [§63.1366(h)(3)(i)]

(ii) Detection instrument performance criteria. [§63.1366(h)(3)(ii)]

(B) Except as provided in §63.1366(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the 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. [§63.1366(h)(3)(ii)(A)]

(C) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1366(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 §63.1366(h)(3)(ii)(A). [§63.1366(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 40 CFR Part 60, appendix A. [§63.1366(h)(3)(iii)]

(iv) Calibration gases shall be as follows: [§63.1366(h)(3)(iv)]

(A) Zero air (less than 10 parts per million hydrocarbon in air); and [§63.1366(h)(3)(iv)(A)]

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. 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 §63.1366(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. [§63.1366(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. [§63.1366(h)(3)(v)]

(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance. [§63.1366(h)(3)(vi)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1366(h)(5). [§63.1366(h)(4)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.1366(h)(4)(i)]

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected. [§63.1366(h)(4)(ii)]

(5) 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 §63.1361, 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. [§63.1366(h)(5)]

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii) if: [§63.1366(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 §63.1366(h)(2)(i), (ii), or (iii); and [§63.1366(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. Inspection is not required more than once annually. [§63.1366(h)(6)(ii)]

(7) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii)(A) if: [§63.1366(h)(7)]
  (i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [§63.1366(h)(7)(i)]
  (ii) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. [§63.1366(h)(7)(ii)]
(8) Records shall be maintained as specified in §63.1367(f). [§63.1366(h)(8)]
(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of §63.1363, the permittee shall comply with the provisions of §63.1363 and is exempt from the requirements of this section. [§63.1366(h)(9)]

Test Methods:

(a) Each permittee subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [§63.180(a)]
(b) Monitoring, as required under this subpart, shall comply with the following requirements: [§63.180(b)]
  (1) Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(1)]
  (2) Detection instruments [§63.180(b)(2)]
    (i) Except as provided for in §63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. [§63.180(b)(2)(i)]
    (ii) If no instrument is available at the plant site that will meet the performance criteria specified in §63.180(b)(2)(i), 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 §63.180(b)(2)(i). [§63.180(b)(2)(ii)]
  (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(3)]
  (4) Calibration gases shall be: [§63.180(b)(4)]
    (i) Zero air (less than 10 parts per million of hydrocarbon in air); and [§63.180(b)(4)(i)]
    (ii) 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 §63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as specified in §63.180(b)(4)(iii) of subpart H. [§63.180(b)(4)(ii) and §63.1363(b)(3)(v)]
    (iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple

calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. [§63.180(b)(4)(iii)]

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.180(b)(5)]

(6) Monitoring data that do not meet the criteria specified in §63.180(b)(1)through (b)(5) may be used to qualify for less frequent monitoring under the provisions in §63.1363(e) or §63.1363(b)(3)(iii)(C) through (G) provided the data meet the conditions specified in §63.180(b)(6)(ii). [§63.180(b)(6), §63.1363(b)(1)(v), and §63.1363(b)(3)(iii)(A)]

(i) The departures from the criteria specified in §63.180(b)(1) through (b)(5) or from the specified monitoring frequency of §63.1363(e) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of appendix A of 40 CFR Part 60 instead of §63.180(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure. [§63.180(b)(6)(ii) and §63.1363(b)(1)(v)]

(c) When equipment is monitored for compliance as required in §§63.164(i), and 63.165(a) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the permittee may elect to adjust or not to adjust the instrument readings for background. If a permittee elects to not adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(b)(1) through (b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If a permittee elects to adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(c)(1) through (c)(4). [§63.180(c)]

(1) The requirements of §63.180(b) (1) through (4) shall apply. [§63.180(c)(1)]

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking. [§63.180(c)(2)]

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR Part 60, appendix A. [§63.180(c)(3)]

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance. [§63.180(c)(4)]

(d) Organic HAP service [§63.180(d)]

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP

content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used. [§63.180(d)(1)]

(2) Other methods [§63.180(d)(2)]

(i) A permittee may use good engineering judgment rather than the procedures in §63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When a permittee and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in §63.180(d)(1) shall be used to resolve the disagreement. [§63.180(d)(2)(i)]

(ii) Conversely, the permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. [§63.180(d)(2)(ii)]

(3) If a permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in §63.180(d)(1), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service. [§63.180(d)(3)]

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment. [§63.180(d)(4)]

(e) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart. [§63.180(f)]

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum. [§63.180(f)(1)]

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off. [§63.180(f)(2)]

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation: [§63.180(f)(3)]

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta\frac{P}{t}$ =Change in pressure, psig/hr.

P_f=Final pressure, psig.

P_i=Initial pressure, psig.

$t_f - t_i$ =Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the permittee shall use a pressure measurement device with a precision of at least +10 percent of the test

pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour. [§63.180(f)(4)]

(5) An alternative procedure may be used for leak testing the equipment if the permittee demonstrates the alternative procedure is capable of detecting a pressure loss or rise. [§63.180(f)(5)]

(f) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart. [§63.180(g)]

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off. [§63.180(g)(1)]

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure. [§63.180(g)(2)]

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected. [§63.180(g)(3)]

(4) An alternative procedure may be used for leak testing the equipment, if the permittee demonstrates the alternative procedure is capable of detecting losses of fluid. [§63.180(g)(4)]

Recordkeeping:

(a) Recordkeeping requirements. [§63.1363(g)]

(1) The permittee of more than one group of processes subject to the provisions of this section 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. [§63.1363(g)(1)]

(2) General recordkeeping. Except as provided in §63.1363(g)(5), the following information pertaining to all equipment subject to the requirements in this section shall be recorded: [§63.1363(g)(2)]

(i) Information required [§63.1363(g)(2)(i)]

(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to §63.1363(f), need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors 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 within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored. [§63.1363(g)(2)(i)(A)]

(B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of subpart H of this part and valves subject to the provisions of §63.1363(e)(4). [§63.1363(g)(2)(i)(B)]

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(2)(i)(C)]

(ii) Identification numbers [§63.1363(g)(2)(ii)]

(A) 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 §63.1363(c)(7) or §§63.164(h) or 63.165(c) of subpart H of this part. [§63.1363(g)(2)(ii)(A)]

(B) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.164(i) of subpart H of this part. [§63.1363(g)(2)(ii)(B)]

(iii) Identification numbers [§63.1363(g)(2)(iii)]

(A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of subpart H of this part. [§63.1363(g)(2)(iii)(A)]

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of subpart H of this part. [§63.1363(g)(2)(iii)(B)]

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified. [§63.1363(g)(2)(iv)]

(v) The following information shall be recorded for each dual mechanical seal system: [§63.1363(g)(2)(v)]

(A) Design criteria required by §63.1363(c)(5)(vi)(A) and §63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and [§63.1363(g)(2)(v)(A)]

(B) Any changes to these criteria and the reasons for the changes. [§63.1363(g)(2)(v)(B)]

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under §63.1363(f) and a copy of the plan for monitoring this equipment. [§63.1363(g)(2)(vi)]

(vii) A list of connectors removed from and added to the process, as described in §63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used. [§63.1363(g)(2)(vii)]

(viii) For batch processes that the permittee elects to monitor as provided under §63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored. [§63.1363(g)(2)(viii)]

(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1363(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 §63.1363(g)(4) for leaking equipment identified in this inspection,

except as provided in §63.1363(g)(5). These records shall be retained for 5 years. [§63.1363(g)(3)]

(4) Monitoring records. When each leak is detected as specified in §63.1363(c) and (e) and §§63.164, 63.169, and 63.174 of subpart H of this part, the permittee shall record the information specified in §63.1363(g)(4)(i) through (viii). All records shall be retained for 5 years, in accordance with the requirements of §63.10(b)(1) of subpart A of this part. [§63.1363(g)(4)]

(i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1363(g)(4)(i)]

(ii) The date the leak was detected and the date of first attempt to repair the leak. [§63.1363(g)(4)(ii)]

(iii) The date of successful repair of the leak. [§63.1363(g)(4)(iii)]

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR Part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. [§63.1363(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. [§63.1363(g)(4)(v)]

(A) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.1367(a), for the source or may be part of a separate 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. [§63.1363(g)(4)(v)(A)]

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1363(g)(4)(v)(B)]

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1363(g)(4)(vi)]

(vii) Monitoring [§63.1363(g)(4)(vii)]

(A) If the alternative in §63.174(c)(1)(ii) of subpart H of this part 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) of subpart H of this part, as described in §63.174(c)(1) of subpart H of this part. [§63.1363(g)(4)(vii)(A)]

(B) The date and results of follow-up monitoring as required in §63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1363(g)(4)(vii)(B)]

(viii) The date and results of the monitoring required in §63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii)of subpart H of this part. 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. [§63.1363(g)(4)(viii)]

(ix) Copies of the periodic reports as specified in §63.1363(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1363(g)(4)(ix)]

(5) Records of pressure tests. The permittee who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of §63.1363(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1363(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. [§63.1363(g)(5)(i)]

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the permittee does not adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii) of subpart H of this part. [§63.1363(g)(5)(ii)]

(iii) 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 this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(5)(iii)]

(iv) The dates of each pressure test required in §63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. [§63.1363(g)(5)(iv)]

(v) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1363(g)(5)(v)]

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: [§63.1363(g)(5)(vi)]

(A) The date of each pressure test and the date of each leak repair attempt. [§63.1363(g)(5)(vi)(A)]

(B) Repair methods applied in each attempt to repair the leak. [§63.1363(g)(5)(vi)(B)]

(C) The reason for the delay of repair. [§63.1363(g)(5)(vi)(C)]

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1363(g)(5)(vi)(D)]

(E) The date of successful repair. [§63.1363(g)(5)(vi)(E)]

(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) of subpart H of this part 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) of subpart H of this part. The results shall include: [§63.1363(g)(6)]

(i) The background level measured during each compliance test. [§63.1363(g)(6)(i)]

(ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1363(g)(6)(ii)]

(7) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1363(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1363(b)(3)(ii). The records specified in §63.1363(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1363(g) (7)(ii) and (iii) shall be retained for 5 years. [§63.1363(g)(7)]

(i) The design specifications and performance demonstrations specified in §63.1363(g)(7)(i)(A) through (C). [§63.1363(g)(7)(i)]

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1363(g)(7)(i)(A)]

(B) The dates and descriptions of any changes in the design specifications. [§63.1363(g)(7)(i)(B)]

(C) A description of the parameter or parameters monitored, as required in §63.1363(b)(3)(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. [§63.1363(g)(7)(i)(D)]

(ii) Records of operation of closed-vent systems and control devices. [§63.1363(g)(7)(ii)]

(A) Dates and durations when the closed-vent systems and control devices required in §63.1363(c) and §§63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters. [§63.1363(g)(7)(ii)(A)]

(B) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1363(g)(7)(ii)(B)]

(C) Dates and durations of startups and shutdowns of control devices required in §63.1363(c) of this section and §§63.164 through 63.166 of subpart H of this part. [§63.1363(g)(7)(ii)(C)]

(iii) Records of inspections of closed-vent systems subject to the provisions of §63.172 of subpart H of this part. [§63.1363(g)(7)(iii)]

(A) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (2) of subpart H of this part 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. [§63.1363(g)(7)(iii)(A)]

(B) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in §63.1363(g)(4) shall be recorded. [§63.1363(g)(7)(iii)(B)]

(8) 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/vapor 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. [§63.1363(g)(8)]

(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section. [§63.1363(g)(9)]

(10) Records of Inspections. The permittee shall keep records specified in §63.1367(f)(1) through (6). [§63.1367(f)]

(i) 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 §63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(1)]

(ii) 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 §63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(2)]

(iii) 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 §63.1367(f)(3)(i) or (ii). [§63.1367(f)(3)]

(A) Hourly records of whether the flow indicator specified under §63.1362(j)(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. [§63.1367(f)(3)(i)]

(iv) For each inspection conducted in accordance with §63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1367(f)(4)(i) through (ix). [§63.1367(f)(4)]

(A) Identification of the leaking equipment. [§63.1367(f)(4)(i)]

(B) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1366(h)(3); or a record of that the leak was detected by sensory observations. [§63.1367(f)(4)(ii)]

(C) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1367(f)(4)(iii)]

(D) Maximum instrument reading measured by the method specified in §63.1366(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1367(f)(4)(iv)]

(E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1367(f)(4)(v)]

(F) The name, initials, or other form of identification of the permittee (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1367(f)(4)(vi)]

(G) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1367(f)(4)(viii)]

(H) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1367(f)(4)(viii)]

(I) The date of successful repair of the leak. [§63.1367(f)(4)(ix)]

(v) For each inspection conducted in accordance with §63.1366(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. [§63.1367(f)(5)]

(vi) For each visual inspection conducted in accordance with §63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1367(f)(6)]

<u>Reporting:</u>

(a) Reporting Requirements. [§63.1363(h)]

(1) The permittee of a source subject to this section shall submit the reports listed in §63.1363(h)(1)(i). [§63.1363(h)(1)]

(i) Periodic reports described in §63.1363(h)(3). [§63.1363(h)(1)(ii)]

(2) Periodic reports. The permittee of a source subject to this section shall submit Periodic reports. [§63.1363(h)(3)]

(i) A report containing the information in §63.1363(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [§63.1363(h)(3)(i)]

(ii) For equipment complying with the provisions of §63.1363(b) through (g), the Periodic report shall contain the summary information listed in §63.1363(h)(3)(ii)(A) through (L) for each monitoring period during the 6-month period. [§63.1363(h)(3)(ii)]

(A) The number of valves for which leaks were detected as described in §63.1363(e)(2), the percent leakers, and the total number of valves monitored; [§63.1363(h)(3)(ii)(A)]

(B) The number of valves for which leaks were not repaired as required in §63.1363(e)(7), identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(B)]

(C) The number of pumps and agitators for which leaks were detected as described in §63.1363(c)(2), the percent leakers, and the total number of pumps and agitators monitored; [§63.1363(h)(3)(ii)(C)]

(D) The number of pumps and agitators for which leaks were not repaired as required in §63.1363(c)(3); [§63.1363(h)(3)(ii)(D)]

(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part; [§63.1363(h)(3)(ii)(E)]

(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part; [§63.1363(h)(3)(ii)(F)]

(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; [§63.1363(h)(3)(ii)(G)]

(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(H)]

(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1363(h)(3)(ii)(I)]

(J) The results of all monitoring to show compliance with §§63.164(i) and 63.165(a) of subpart H of this part conducted within the semiannual reporting period. [§63.1363(h)(3)(ii)(J)]

(K) If applicable, the initiation of a monthly monitoring program under either §63.1363(c)(4)(ii) or §63.1363(e)(4)(i)(A). [§63.1363(h)(3)(ii)(K)]

(L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of subpart H of this part. [§63.1363(h)(3)(ii)(L)]

(iii) For permittees electing to meet the requirements of §63.178(b) of subpart H of this part, the Periodic report shall include the information listed in §63.1363(h)(3)(iii)(A) through (E) for each process. [§63.1363(h)(3)(iii)]

(A) Product process equipment train identification; [§63.1363(h)(3)(iii)(A)]

(B) The number of pressure tests conducted; [§63.1363(h)(3)(iii)(B)]

(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1363(h)(3)(iii)(C)]

(D) The facts that explain any delay of repairs; and [§63.1363(h)(3)(iii)(D)]

(E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of this part. [§63.1363(h)(3)(iii)(E)]

(iv) Any change in the information submitted under §63.1363(h)(2) shall be provided in the next Periodic report. [§63.1363(h)(3)(iv)]

PERMIT CONDITION EU0001-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Heat Exchangers subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations/Monitoring:

(a) Unless one or more of the conditions specified in §63.104(a)(1) through (6) of subpart F of this part are met, the permittee shall monitor each heat exchange system that is used to cool process equipment in PAI process units that are part of an affected source as defined in §63.1360(a) according to the provisions in either §63.104(b) or (c) of subpart F of this part. Whenever a leak is detected, the permittee shall comply with the requirements in §63.104(d) of subpart F of this part. Delay of repair of heat exchange systems for which leaks have been detected is allowed in accordance with the provisions of §63.104(e) of subpart F of this part. [§63.1362(f)]

(1) The permittee who elects to comply with the requirements of §63.1362(f) by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in §63.104(b)(1) through (b)(6). The cooling water shall be monitored for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. [§63.104(b)]

(i) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks. [§63.104(b)(1)]

(ii) Recirculating heat exchange systems [§63.104(b)(2)]

(A) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of this subpart. [§63.104(b)(2)(i)]

(iii)The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator. [§63.104(b)(3)]

(iv) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers. [§63.104(b)(4)]

(A) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid. [§63.104(b)(4)(i)]

(B) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at

which the cooling water exits the plant site or chemical manufacturing process units. [§63.104(b)(4)(ii)]

(C) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in PAI process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers. [§63.104(b)(4)(iii)]

(v) A minimum of three sets of samples shall be taken at each entrance and exit as defined in §63.104(b)(4). The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable. [§63.104(b)(5)]

(vi) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater. [§63.104(b)(6)]

(2) The permittee who elects to comply with the requirement of §63.1362(f) by monitoring using a surrogate indicator of heat exchange system leaks shall comply with the requirements specified in §3.104(c)(1) through (c)(3). Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity or other representative indicators. [§63.104(c)]

(i) The permittee shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. The plan shall require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of this section. The plan shall include the information specified in §63.104(c)(1)(i) and (c)(1)(ii). [§63.104(c)(1)]

(A) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak. [§63.104(c)(1)(i)]

(B) The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated. [§63.104(c)(1)(ii)]

(C) The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks. [§63.104(c)(1)(iii)]

(D) The records that will be maintained to document compliance with the requirements of this section. [§63.104(c)(1)(iv)]

(ii) If a substantial leak is identified by methods other than those described in the monitoring plan and the method(s) specified in the plan could not detect the leak, the permittee shall revise the plan and document the basis for the changes. The permittee shall complete the revisions to the plan no later than 180 days after discovery of the leak. [§63.104(c)(2)]

(iii)The permittee shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on-site, or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. If the monitoring plan is superseded, the permittee shall retain the most recent superseded plan

at least until 5 years from the date of its creation. The superseded plan shall be retained on-site (or accessible from a central location by computer or other means that provides access within two hours after a request) for at least 6 months after its creation. [§63.104(c)(3)]

(3) If a leak is detected according to the criteria of §63.104(b) or (c), the permittee shall comply with the requirements in §63.104(d)(1) and (d)(2), except as provided in §63.104(e). [§63.104(d)]

(i) The leak shall be repaired as soon as practical but not later than 45 calendar days after the permittee receives results of monitoring tests indicating a leak. The leak shall be repaired unless the permittee demonstrates that the results are due to a condition other than a leak. [§63.104(d)(1)]

(ii) Once the leak has been repaired, the permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. [§63.104(d)(2)]

(4) Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in §63.104(e)(1) or (e)(2) is met. All time periods in §63.104(e)(1) and (e)(2) shall be determined from the date when the permittee determines that delay of repair is necessary. [§63.104(e)]

(i) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required. [§63.104(e)(1)]

(ii) If a shutdown is not expected within the next 2 months, the permittee may delay repair as provided in §63.104(e)(2)(i) or (e)(2)(ii). Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical. [§63.104(e)(2)]

(A) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the permittee may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The permittee shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in §63.104(e)(2)(i)(A) and (e)(2)(i)(B). [§63.104(e)(2)(i)]

(1) The permittee shall calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of total hazardous air pollutants listed in table 4 of this subpart in the cooling water from the leaking heat exchanger by the flowrate of the cooling water from the leaking heat exchanger by the expected duration of the delay. The permittee may calculate potential emissions using total organic carbon concentration instead of total hazardous air pollutants listed in table 4 of this subpart. [§63.104(e)(2)(i)(A)]

(2) The permittee shall determine emissions from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair. [§63.104(e)(2)(i)(B)]

(B) If repair is delayed for reasons other than those specified in §63.104(e)(2)(i), the permittee may delay repair up to a maximum of 120 calendar days. The permittee shall demonstrate that the necessary parts or personnel were not available. [§63.104(e)(2)(ii)]

Recordkeeping:

(a) The permittee must keep the records specified in this section up-to-date and readily accessible. [§63.1367(b)]
  (1) Each measurement of a control device operating parameter monitored in accordance with §63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of §63.1362(d). [§63.1367(b)(1)]
  (2) The permittee that complies with the standards for process vents shall maintain up-to-date, readily accessible records of the information specified in §63.1367(b)(6)(i) through (vii) to document that HAP emissions are below the limits specified in §63.1362: [§63.1367(b)(6)]
    (i) The number of batches per year for each batch process. [§63.1367(b)(6)(iii)]
    (ii) The operating hours per year for continuous processes. [§63.1367(b)(6)(iv)]
    (iii) The number of batches and the number of operating hours for processes that contain both batch and continuous operations. [§63.1367(b)(6)(v)]
    (iv) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in §63.1365(b)(11). [§63.1367(b)(6)(vii)]
    (v) Periods of planned routine maintenance as described in §63.1362(c)(5). [§63.1367(b)(6)(viii)]
    (vi) A record of the determination that the conditions in §63.1365(b)(11)(iii)(D)(1) or (2) are met. [§63.1367(b)(6)(ix)]
  (3) Daily schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [§63.1367(b)(7)]
  (4) If the permittee elects to develop process unit groups, the permittee must keep records of the PAI and non-PAI process units in the process unit group, including records of the operating time for process units used to establish the process unit group. The permittee must also keep records of any redetermination of the primary product for the process unit group. [§63.1367(b)(9)]
  (5) All maintenance performed on the air pollution control equipment. [§63.1367(b)(10)]

(b) The permittee shall retain the records identified in §63.104(f)(1)(i) through (f)(1)(iv) as specified in §63.1367(e). [§63.104(f)(1) and §63.1367(e)]
  (1) Monitoring data required by this section indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination; [§63.104(f)(1)(i)]
  (2) Records of any leaks detected by procedures subject to §63.104(c)(2) and the date the leak was discovered; [§63.104(f)(1)(ii)]
  (3) The dates of efforts to repair leaks; and [§63.104(f)(1)(iii)]
  (4) The method or procedure used to confirm repair of a leak and the date repair was confirmed. [§63.104(f)(1)(iv)]

Reporting:

(a) The permittee shall prepare Periodic reports in accordance with §63.1368(g)(1) and (2) and submit them to the Administrator. [§63.1368(g)]
  (1) Except as provided in §63.1368(g)(1)(i), the permittee shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period. [§63.1368(g)(1)]

(i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source. [§63.1368(g)(1)(i)]

(2) The permittee shall include the information in §63.1368(g)(2)(i) through (xii), as applicable. [§63.1368(g)(2)]

(i) Each Periodic report must include the information in §63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable. [§63.1368(g)(2)(i)]

(ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the information in §63.1368(g)(2)(ii)(A) through (D). [§63.1368(g)(2)(ii)]

(A) 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. [§63.1368(g)(2)(ii)(A)]

(B) Duration of excursions, as defined in §63.1366(b)(7). [§63.1368(g)(2)(ii)(B)]

(C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit. [§63.1368(g)(2)(ii)(C)]

(iii) For each vapor collection system or closed vent system with a bypass line subject to §63.1362(j)(1), records required under §63.1366(f) 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 §63.1362(j)(2), records required under §63.1366(f) 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. [§63.1368(g)(2)(iii)]

(iv) The information in §63.1368(g)(2)(iv)(A) through (D) shall be stated in the Periodic report, when applicable. [§63.1368(g)(2)(iv)]

(A) No excess emissions. [§63.1368(g)(2)(iv)(A)]

(B) No exceedances of a parameter. [§63.1368(g)(2)(iv)(B)]

(C) No excursions. [§63.1368(g)(2)(iv)(C)]

(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted. [§63.1368(g)(2)(iv)(D)]

(v) Updates to the corrective action plan. [§63.1368(g)(2)(viii)]

(vi) Records of process units added to each process unit group, if applicable. [§63.1368(g)(2)(ix)]

(vii) Records of redetermination of the primary product for a process unit group. [§63.1368(g)(2)(x)]

(viii) For each inspection conducted in accordance with §63.1366(h)(2) or (3) during which a leak is detected, the records specify in §63.1367(h)(4) must be included in the next Periodic report. [§63.1368(g)(2)(xi)]

(b) Notification of process change. [§63.1368(h)]

(1) Except as specified in §63.1368(h)(2), whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the permittee shall submit the information specified in §63.1368(h)(1)(i) through (iv) with the next Periodic report required under §63.1368(g). For the purposes of this section, a process change means the startup of a new process, as defined in §63.1361. [§63.1368(h)(1)]

(i) A brief description of the process change; [§63.1368(h)(1)(i)]
(ii) A description of any modifications to standard procedures or quality assurance procedures; [§63.1368(h)(1)(ii)]
(iii) Revisions to any of the information reported in the original Notification of Compliance Status report under §63.1368(f); and [§63.1368(h)(1)(iii)]
(iv) Information required by the Notification of Compliance Status report under §63.1368(f) for changes involving the addition of processes or equipment. [§63.1368(h)(1)(iv)]

(2) The permittee must submit a report 60 days before the scheduled implementation date the following: [§63.1368(h)(2)]
(i) Any change in the activity covered by the Precompliance report. [§63.1368(h)(2)(i)]

(c) If the permittee invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next semi-annual periodic report required by §63.1368(g). If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported. [§63.104(f)(2) and §63.1368(l)]
(1) The permittee shall report the presence of the leak and the date that the leak was detected. [§63.104(f)(2)(i)]
(2) The permittee shall report whether or not the leak has been repaired. [§63.104(f)(2)(ii)]
(3) The permittee shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in §63.104(e)(2), documentation of emissions estimates must also be submitted. [§63.104(f)(2)(iii)]
(4) If the leak remains unrepaired, the permittee shall report the expected date of repair. [§63.104(f)(2)(iv)]
(5) If the leak is repaired, the permittee shall report the date the leak was successfully repaired. [§63.104(f)(2)(v)]

PERMIT CONDITION EU0002-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Bag Dumps and Product Dryers subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

Gaseous HAP emissions from product dryers and bag dumps shall be controlled in accordance with the provisions for organic HAP emissions from process vents in §63.1362(b). [§63.1362(e)(3)]

Monitoring:

(a) To provide evidence of continued compliance with the standard, the permittee shall install, operate, and maintain monitoring devices as specified in §63.1366. During the initial compliance demonstration, maximum or minimum operating parameter levels, or other design and operating characteristics, 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, as applicable, shall be used to establish the operating parameter level or characteristic. [§63.1366(a)]

(b) Monitoring for control devices [§63.1366(b)]
(1) 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 paragraphs

§63.1366(b)(1)(ii) through (xiii), and are summarized in Table 3 of this subpart. [§63.1366(b)(1)]

(i) Scrubbers. For affected sources using liquid scrubbers, the permittee shall establish a minimum scrubber liquid flow rate or pressure drop as a site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the scrubber is controlling HAP from an emission stream as required by the standards in §63.1362. If the scrubber uses a caustic solution to remove acid emissions, the pH of the effluent scrubber liquid shall also be monitored once a day. The minimum scrubber liquid flow rate or pressure drop shall be based on the conditions under which the initial compliance demonstration was conducted. [§63.1366(b)(1)(ii)]

(A)The monitoring device used to determine the pressure drop shall be certified by the manufacturer to be accurate to within a gage pressure of ±10 percent of the maximum pressure drop measured. [§63.1366(b)(1)(ii)(A)]

(B) The monitoring device used for measurement of scrubber liquid flowrate shall be certified by the manufacturer to be accurate to within ±10 percent of the design scrubber liquid flowrate. [§63.1366(b)(1)(ii)(B)]

(C) The monitoring device shall be calibrated annually. [§63.1366(b)(1)(ii)(C)]

(ii) Thermal incinerators. For each thermal incinerator, the permittee shall monitor the temperature of the gases exiting the combustion chamber as the site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is controlling HAP from an emission stream subject to the standards in §63.1362. [§63.1366(b)(1)(vii)]

(A)The temperature monitoring device must be accurate to within ±0.75 percent of the temperature measured in degrees Celsius or ±2.5 °C, whichever is greater. [§63.1366(b)(1)(vii)(A)]

(B) The monitoring device must be calibrated annually. [§63.1366(b)(1)(vii)(B)]

(iii) Closed-vent system visual inspections. The permittee shall comply with the requirements in either §63.1366(b)(1)(xiii)(A) or (B): [§63.1366(b)(1)(xiii)]

(A) Set the flow indicator at the entrance to any bypass line that could divert the stream away from the control device to the atmosphere to take a reading at least once every 15 minutes; or [§63.1366(b)(1)(xiii)(A)]

(B) If the bypass device valve installed at the inlet to the bypass device is secured in the closed position with a car-seal or lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. [§63.1366(b)(1)(xiii)(B)]

(2) Averaging periods. Averaging periods for parametric monitoring levels shall be established according to §63.1366(b)(2)(i) through (iii). [§63.1366(b)(2)]

(i) Except as provided in §63.1366(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 §63.1366(b)(3)(iii) recorded during the operating day or block. [§63.1366(b)(2)(i)]

(ii) The operating day or block shall be defined in the Notification of Compliance Status report. The operating day may be from midnight to midnight or another continuous 24-hour period. The operating block may be used as an averaging period only for vents from batch operations, and is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a series of consecutive batch operations. [§63.1366(b)(2)(ii)]

(iii) Monitoring values taken during periods in which the control devices are not controlling HAP from an emission stream subject to the standards in §63.1362, as indicated by periods of no flow or periods when only streams that are not subject to the standards in §63.1362 are controlled, 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. [§63.1366(b)(2)(iii)]

(3) Procedures for setting parameter levels for control devices used to control emissions from process vents. [§63.1366(b)(3)]

(i) The parameter level must be established as follows: [§63.1366(b)(3)(ii)]

(A) If the operating parameter level to be established is a maximum or minimum, it must be based on the average of the average values from each of the three test runs. [§63.1366(b)(3)(ii)(A)]

(B) The permittee may establish the parametric monitoring level(s) based on the performance test supplemented by engineering assessments and/or 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 plan. Determination of the parametric monitoring level using these procedures is subject to review and approval by the Administrator. [§63.1366(b)(3)(ii)(B)]

(ii) Parameter levels for control devices controlling batch process vents. For devices controlling batch process vents alone or in combination with other streams, the level(s) shall be established in accordance with §63.1366 (b)(3)(iii)(A) or (B). [§63.1366(b)(3)(iii)]

(A) A single level for the batch process(es) shall be calculated from the initial compliance demonstration. [§63.1366(b)(3)(iii)(A)]

(B) The permittee may establish separate levels for each batch emission episode or combination of emission episodes selected to be controlled. If separate monitoring levels are established, the permittee must provide a record indicating at what point in the daily schedule or log of processes required to be recorded per the requirements of §63.1367(b)(7), 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 level is less than 15 minutes. [§63.1366(b)(3)(iii)(B)]

(4) Exceedances of operating parameters. An exceedance of an operating parameter is defined as one of the following: [§63.1366(b)(6)]

(i) If the parameter level, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration. [§63.1366(b)(6)(i)]

(ii) If the parameter level, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration. [§63.1366(b)(6)(ii)]

(5) Excursions. Excursions are defined by either of the two cases listed in §63.1366(b)(7)(i) or (ii). [§63.1366(b)(7)]

(i) When the period of control device operation is 4 hours or greater in an operating day or block and monitoring data are insufficient to constitute a valid hour of data, as defined in §63.1366(b)(7)(iii), for at least 75 percent of the operating hours. [§63.1366(b)(7)(i)]

(ii) When the period of control device operation is less than 4 hours in an operating day or block and more than 1 of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data. [§63.1366(b)(7)(ii)]

(iii) Monitoring data are insufficient to constitute a valid hour of data, as used in §63.1366(b)(7)(i) and (ii), if measured values are unavailable for any of the required 15-minute periods within the hour. [§63.1366(b)(7)(iii)]

(6) Violations. Exceedances of parameters monitored according to the provisions of §63.1366(b)(1)(ii), (iv) through (ix), and §63.1366(b)(5)(i)(A), or excursions as defined by §63.1366(b)(7)(i) and (ii) , constitute violations of the operating limit according to §63.1366(b)(8)(i), (ii), and (iv). Exceedances of the temperature limit monitored according to the provisions of §63.1366(b)(1)(iii) constitutes a violation of the emission limit according to §63.1366(b)(8)(i), (ii), and (iv). [§63.1366(b)(8)]

(i) Except as provided in §63.1366(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. [§63.1366(b)(8)(i)]

(ii) Except as provided in §63.1366(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 service. [§63.1366(b)(8)(ii)]

(iii) Periods of time when monitoring measurements exceed the parameter values as well as periods of inadequate monitoring data do not constitute a violation if they occur during a startup, shutdown, or malfunction, and the facility operates in accordance with §63.6(e)(1). [§63.1366(b)(8)(iv)]

Recordkeeping:

(a) The permittee must keep the records specified in this section up-to-date and readily accessible. [§63.1367(b)]

(1) Each measurement of a control device operating parameter monitored in accordance with §63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of §63.1362(d). [§63.1367(b)(1)]

(2) The permittee that complies with the standards for process vents shall maintain up-to-date, readily accessible records of the information specified in §63.1367(b)(6)(i) through (vii) to document that HAP emissions are below the limits specified in §63.1362: [§63.1367(b)(6)]

(i) The number of batches per year for each batch process. [§63.1367(b)(6)(iii)]

(ii) The operating hours per year for continuous processes. [§63.1367(b)(6)(iv)]

(iii) The number of batches and the number of operating hours for processes that contain both batch and continuous operations. [§63.1367(b)(6)(v)]

(iv) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in §63.1365(b)(11). [§63.1367(b)(6)(vii)]

(v) Periods of planned routine maintenance as described in §63.1362(c)(5). [§63.1367(b)(6)(viii)]

(vi) A record of the determination that the conditions in §63.1365(b)(11)(iii)(D)(1) or (2) are met. [§63.1367(b)(6)(ix)]

(3) Daily schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [§63.1367(b)(7)]

(4) If the permittee elects to develop process unit groups, the permittee must keep records of the PAI and non-PAI process units in the process unit group, including records of the operating

time for process units used to establish the process unit group. The permittee must also keep records of any redetermination of the primary product for the process unit group. [§63.1367(b)(9)]

(5) All maintenance performed on the air pollution control equipment. [§63.1367(b)(10)]

Reporting:

(a) The permittee shall prepare Periodic reports in accordance with §63.1368(g)(1) and (2) and submit them to the Administrator. [§63.1368(g)]

(1) Except as provided in §63.1368(g)(1)(i), the permittee shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period. [§63.1368(g)(1)]

(i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source. [§63.1368(g)(1)(i)]

(2) The permittee shall include the information in §63.1368(g)(2)(i) through (xii), as applicable. [§63.1368(g)(2)]

(i) Each Periodic report must include the information in §63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable. [§63.1368(g)(2)(i)]

(ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the information in §63.1368(g)(2)(ii)(A) through (D). [§63.1368(g)(2)(ii)]

(A) 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. [§63.1368(g)(2)(ii)(A)]

(B) Duration of excursions, as defined in §63.1366(b)(7). [§63.1368(g)(2)(ii)(B)]

(C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit. [§63.1368(g)(2)(ii)(C)]

(iii) For each vapor collection system or closed vent system with a bypass line subject to §63.1362(j)(1), records required under §63.1366(f) 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 §63.1362(j)(2), records required under §63.1366(f) 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. [§63.1368(g)(2)(iii)]

(iv) The information in §63.1368(g)(2)(iv)(A) through (D) shall be stated in the Periodic report, when applicable. [§63.1368(g)(2)(iv)]

(A) No excess emissions. [§63.1368(g)(2)(iv)(A)]

(B) No exceedances of a parameter. [§63.1368(g)(2)(iv)(B)]

(C) No excursions. [§63.1368(g)(2)(iv)(C)]

(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted. [§63.1368(g)(2)(iv)(D)]

(v) Updates to the corrective action plan. [§63.1368(g)(2)(vii)]
(vi) Records of process units added to each process unit group, if applicable. [§63.1368(g)(2)(ix)]
(vii) Records of redetermination of the primary product for a process unit group. [§63.1368(g)(2)(x)]
(viii) For each inspection conducted in accordance with §63.1366(h)(2) or (3) during which a leak is detected, the records specify in §63.1367(h)(4) must be included in the next Periodic report. [§63.1368(g)(2)(xi)]

(b) Notification of process change. [§63.1368(h)]
(1) Except as specified in §63.1368(h)(2), whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the permittee shall submit the information specified in §63.1368(h)(1)(i) through (iv) with the next Periodic report required under §63.1368(g). For the purposes of this section, a process change means the startup of a new process, as defined in §63.1361. [§63.1368(h)(1)]
(i) A brief description of the process change; [§63.1368(h)(1)(i)]
(ii) A description of any modifications to standard procedures or quality assurance procedures; [§63.1368(h)(1)(ii)]
(iii) Revisions to any of the information reported in the original Notification of Compliance Status report under §63.1368(f); and [§63.1368(h)(1)(iii)]
(iv) Information required by the Notification of Compliance Status report under §63.1368(f) for changes involving the addition of processes or equipment. [§63.1368(h)(1)(iv)]
(2) The permittee must submit a report 60 days before the scheduled implementation date the following: [§63.1368(h)(2)]
(i) Any change in the activity covered by the Precompliance report. [§63.1368(h)(2)(i)]

PERMIT CONDITION (EU0003 through EU0018)-003 and EU0022-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Process vents subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall reduce the uncontrolled organic HAP emissions from a process vent by 98 percent by weight or greater. [§63.1362(b)(2)(ii)(A)]
(b) HCl and Cl_2 emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater. [§63.1362(b)(3)(ii)]

Monitoring:

(a) To provide evidence of continued compliance with the standard, the permittee shall install, operate, and maintain monitoring devices as specified in §63.1366. During the initial compliance demonstration, maximum or minimum operating parameter levels, or other design and operating characteristics, 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, as applicable, shall be used to establish the operating parameter level or characteristic. [§63.1366(a)]
(b) Monitoring for control devices [§63.1366(b)]

(1) 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 paragraphs §63.1366(b)(1)(ii) through (xiii), and are summarized in Table 3 of this subpart. [§63.1366(b)(1)]

(i) Scrubbers. For affected sources using liquid scrubbers, the permittee shall establish a minimum scrubber liquid flow rate or pressure drop as a site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the scrubber is controlling HAP from an emission stream as required by the standards in §63.1362. If the scrubber uses a caustic solution to remove acid emissions, the pH of the effluent scrubber liquid shall also be monitored once a day. The minimum scrubber liquid flow rate or pressure drop shall be based on the conditions under which the initial compliance demonstration was conducted. [§63.1366(b)(1)(ii)]

(A) The monitoring device used to determine the pressure drop shall be certified by the manufacturer to be accurate to within a gage pressure of ±10 percent of the maximum pressure drop measured. [§63.1366(b)(1)(ii)(A)]

(B) The monitoring device used for measurement of scrubber liquid flowrate shall be certified by the manufacturer to be accurate to within ±10 percent of the design scrubber liquid flowrate. [§63.1366(b)(1)(ii)(B)]

(C) The monitoring device shall be calibrated annually. [§63.1366(b)(1)(ii)(C)]

(ii) Thermal incinerators. For each thermal incinerator, the permittee shall monitor the temperature of the gases exiting the combustion chamber as the site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is controlling HAP from an emission stream subject to the standards in §63.1362. [§63.1366(b)(1)(vii)]

(A) The temperature monitoring device must be accurate to within ±0.75 percent of the temperature measured in degrees Celsius or ±2.5 °C, whichever is greater. [§63.1366(b)(1)(vii)(A)]

(B) The monitoring device must be calibrated annually. [§63.1366(b)(1)(vii)(B)]

(iii) Closed-vent system visual inspections. The permittee shall comply with the requirements in either §63.1366(b)(1)(xiii)(A) or (B): [§63.1366(b)(1)(xiii)]

(A) Set the flow indicator at the entrance to any bypass line that could divert the stream away from the control device to the atmosphere to take a reading at least once every 15 minutes; or [§63.1366(b)(1)(xiii)(A)]

(B) If the bypass device valve installed at the inlet to the bypass device is secured in the closed position with a car-seal or lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. [§63.1366(b)(1)(xiii)(B)]

(2) Averaging periods. Averaging periods for parametric monitoring levels shall be established according to §63.1366(b)(2)(i) through (iii). [§63.1366(b)(2)]

(i) Except as provided in §63.1366(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 §63.1366(b)(3)(iii) recorded during the operating day or block. [§63.1366(b)(2)(i)]

(ii) The operating day or block shall be defined in the Notification of Compliance Status report. The operating day may be from midnight to midnight or another continuous 24-hour period. The operating block may be used as an averaging period only for vents from

batch operations, and is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a series of consecutive batch operations. [§63.1366(b)(2)(ii)]

(iii) Monitoring values taken during periods in which the control devices are not controlling HAP from an emission stream subject to the standards in §63.1362, as indicated by periods of no flow or periods when only streams that are not subject to the standards in §63.1362 are controlled, 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. [§63.1366(b)(2)(iii)]

(3) Procedures for setting parameter levels for control devices used to control emissions from process vents. [§63.1366(b)(3)]

(i) The parameter level must be established as follows: [§63.1366(b)(3)(ii)]

(A) If the operating parameter level to be established is a maximum or minimum, it must be based on the average of the average values from each of the three test runs. [§63.1366(b)(3)(ii)(A)]

(B) The permittee may establish the parametric monitoring level(s) based on the performance test supplemented by engineering assessments and/or 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 plan. Determination of the parametric monitoring level using these procedures is subject to review and approval by the Administrator. [§63.1366(b)(3)(ii)(B)]

(ii) Parameter levels for control devices controlling batch process vents. For devices controlling batch process vents alone or in combination with other streams, the level(s) shall be established in accordance with §63.1366 (b)(3)(iii)(A) or (B). [§63.1366(b)(3)(iii)]

(A) A single level for the batch process(es) shall be calculated from the initial compliance demonstration. [§63.1366(b)(3)(iii)(A)]

(B) The permittee may establish separate levels for each batch emission episode or combination of emission episodes selected to be controlled. If separate monitoring levels are established, the permittee must provide a record indicating at what point in the daily schedule or log of processes required to be recorded per the requirements of §63.1367(b)(7), 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 level is less than 15 minutes. [§63.1366(b)(3)(iii)(B)]

(4) Exceedances of operating parameters. An exceedance of an operating parameter is defined as one of the following: [§63.1366(b)(6)]

(i) If the parameter level, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration. [§63.1366(b)(6)(i)]

(ii) If the parameter level, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration. [§63.1366(b)(6)(ii)]

(5) Excursions. Excursions are defined by either of the two cases listed in §63.1366(b)(7)(i) or (ii). . [§63.1366(b)(7)]

(i) When the period of control device operation is 4 hours or greater in an operating day or block and monitoring data are insufficient to constitute a valid hour of data, as defined in §63.1366(b)(7)(iii), for at least 75 percent of the operating hours. [§63.1366(b)(7)(i)]
(ii) When the period of control device operation is less than 4 hours in an operating day or block and more than 1 of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data. [§63.1366(b)(7)(ii)]
(iii) Monitoring data are insufficient to constitute a valid hour of data, as used in §63.1366(b)(7)(i) and (ii), if measured values are unavailable for any of the required 15-minute periods within the hour. [§63.1366(b)(7)(iii)]

(6) Violations. Exceedances of parameters monitored according to the provisions of §63.1366(b)(1)(ii), (iv) through (ix), and §63.1366(b)(5)(i)(A), or excursions as defined by §63.1366(b)(7)(i) and (ii) , constitute violations of the operating limit according to §63.1366(b)(8)(i), (ii), and (iv). Exceedances of the temperature limit monitored according to the provisions of §63.1366(b)(1)(iii) constitutes a violation of the emission limit according to §63.1366(b)(8)(i), (ii), and (iv). [§63.1366(b)(8)]
(i) Except as provided in §63.1366(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. [§63.1366(b)(8)(i)]
(ii) Except as provided in §63.1366(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 service. [§63.1366(b)(8)(ii)]
(iii) Periods of time when monitoring measurements exceed the parameter values as well as periods of inadequate monitoring data do not constitute a violation if they occur during a startup, shutdown, or malfunction, and the facility operates in accordance with §63.6(e)(1). [§63.1366(b)(8)(iv)]

Recordkeeping:

(a) The permittee must keep the records specified in this section up-to-date and readily accessible. [§63.1367(b)]
(1) Each measurement of a control device operating parameter monitored in accordance with §63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of §63.1362(d). [§63.1367(b)(1)]
(2) The permittee that complies with the standards for process vents shall maintain up-to-date, readily accessible records of the information specified in §63.1367(b)(6)(i) through (vii) to document that HAP emissions are below the limits specified in §63.1362: [§63.1367(b)(6)]
(i) The number of batches per year for each batch process. [§63.1367(b)(6)(iii)]
(ii) The operating hours per year for continuous processes. [§63.1367(b)(6)(iv)]
(iii) The number of batches and the number of operating hours for processes that contain both batch and continuous operations. [§63.1367(b)(6)(v)]
(iv) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in §63.1365(b)(11). [§63.1367(b)(6)(vii)]
(v) Periods of planned routine maintenance as described in §63.1362(c)(5). [§63.1367(b)(6)(viii)]
(vi) A record of the determination that the conditions in §63.1365(b)(11)(iii)(D)(1) or (2) are met. [§63.1367(b)(6)(ix)]

(3) Daily schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [§63.1367(b)(7)]
(4) If the permittee elects to develop process unit groups, the permittee must keep records of the PAI and non-PAI process units in the process unit group, including records of the operating time for process units used to establish the process unit group. The permittee must also keep records of any redetermination of the primary product for the process unit group. [§63.1367(b)(9)]
(5) All maintenance performed on the air pollution control equipment. [§63.1367(b)(10)]

Reporting:

(a) The permittee shall prepare Periodic reports in accordance with §63.1368(g)(1) and (2) and submit them to the Administrator. [§63.1368(g)]
(1) Except as provided in §63.1368(g)(1)(i), the permittee shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period. [§63.1368(g)(1)]
(i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source. [§63.1368(g)(1)(i)]
(2) The permittee shall include the information in §63.1368(g)(2)(i) through (xii), as applicable. [§63.1368(g)(2)]
(i) Each Periodic report must include the information in §63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable. [§63.1368(g)(2)(i)]
(ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the information in §63.1368(g)(2)(ii)(A) through (D). [§63.1368(g)(2)(ii)]
(A) 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. [§63.1368(g)(2)(ii)(A)]
(B) Duration of excursions, as defined in §63.1366(b)(7). [§63.1368(g)(2)(ii)(B)]
(C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit. [§63.1368(g)(2)(ii)(C)]
(iii) For each vapor collection system or closed vent system with a bypass line subject to §63.1362(j)(1), records required under §63.1366(f) 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 §63.1362(j)(2), records required under §63.1366(f) 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. [§63.1368(g)(2)(iii)]
(iv) The information in §63.1368(g)(2)(iv)(A) through (D) shall be stated in the Periodic report, when applicable. [§63.1368(g)(2)(iv)]
(A) No excess emissions. [§63.1368(g)(2)(iv)(A)]

(B) No exceedances of a parameter. [§63.1368(g)(2)(iv)(B)]
(C) No excursions. [§63.1368(g)(2)(iv)(C)]
(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted. [§63.1368(g)(2)(iv)(D)]

(v) Updates to the corrective action plan. [§63.1368(g)(2)(vii)]
(vi) Records of process units added to each process unit group, if applicable. [§63.1368(g)(2)(ix)]
(vii) Records of redetermination of the primary product for a process unit group. [§63.1368(g)(2)(x)]
(viii) For each inspection conducted in accordance with §63.1366(h)(2) or (3) during which a leak is detected, the records specify in §63.1367(h)(4) must be included in the next Periodic report. [§63.1368(g)(2)(xi)]

(b) Notification of process change. [§63.1368(h)]

(1) Except as specified in §63.1368(h)(2), whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the permittee shall submit the information specified in §63.1368(h)(1)(i) through (iv) with the next Periodic report required under §63.1368(g). For the purposes of this section, a process change means the startup of a new process, as defined in §63.1361. [§63.1368(h)(1)]
(i) A brief description of the process change; [§63.1368(h)(1)(i)]
(ii) A description of any modifications to standard procedures or quality assurance procedures; [§63.1368(h)(1)(ii)]
(iii) Revisions to any of the information reported in the original Notification of Compliance Status report under §63.1368(f); and [§63.1368(h)(1)(iii)]
(iv) Information required by the Notification of Compliance Status report under §63.1368(f) for changes involving the addition of processes or equipment. [§63.1368(h)(1)(iv)]

(2) The permittee must submit a report 60 days before the scheduled implementation date the following: [§63.1368(h)(2)]
(i) Any change in the activity covered by the Precompliance report. [§63.1368(h)(2)(i)]

PERMIT CONDITION (EU0019 through EU0021)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Storage Vessels subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall either determine the group status of a storage vessel or designate it as a Group 1 storage vessel. If the permittee elects to designate the storage vessel as a Group 1 storage vessel, the permittee is not required to determine the maximum true vapor pressure of the material stored in the storage vessel. [§63.1362(c)(1)]

(b) Except as specified in §63.1362(c)(5), the permittee of a Group 1 storage vessel at an existing affected source, as defined in §63.1361, shall equip the affected storage vessel with the following: [§63.1362(c)(2)]

(1) A closed vent system meeting the conditions of §63.1362(j) and a control device that meets the following condition: [§63.1362(c)(2)(iv)]
(i) Reduces organic HAP emissions by 95 percent by weight or greater;[§63.1362(c)(2)(iv)(A)]

(c) The permittee is exempt from the specifications in §63.1362(c)(2) through (4) during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage vessel between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. [§63.1362(c)(5)]

(d) Compliance with the provisions of §63.1362(c)(2) is demonstrated using the initial compliance procedures in §63.1365(d) and the monitoring requirements in §63.1366. [§63.1362(c)(7)]

Monitoring:

(a) To provide evidence of continued compliance with the standard, the permittee shall install, operate, and maintain monitoring devices as specified in §63.1366. During the initial compliance demonstration, maximum or minimum operating parameter levels, or other design and operating characteristics, 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, as applicable, shall be used to establish the operating parameter level or characteristic. [§63.1366(a)]

(b) Monitoring for control devices [§63.1366(b)]

(1) 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 paragraphs §63.1366(b)(1)(ii) through (xiii), and are summarized in Table 3 of this subpart. [§63.1366(b)(1)]

(i) Scrubbers. For affected sources using liquid scrubbers, the permittee shall establish a minimum scrubber liquid flow rate or pressure drop as a site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the scrubber is controlling HAP from an emission stream as required by the standards in §63.1362. If the scrubber uses a caustic solution to remove acid emissions, the pH of the effluent scrubber liquid shall also be monitored once a day. The minimum scrubber liquid flow rate or pressure drop shall be based on the conditions under which the initial compliance demonstration was conducted. [§63.1366(b)(1)(ii)]

(A) The monitoring device used to determine the pressure drop shall be certified by the manufacturer to be accurate to within a gage pressure of ±10 percent of the maximum pressure drop measured. [§63.1366(b)(1)(ii)(A)]

(B) The monitoring device used for measurement of scrubber liquid flowrate shall be certified by the manufacturer to be accurate to within ±10 percent of the design scrubber liquid flowrate. [§63.1366(b)(1)(ii)(B)]

(C) The monitoring device shall be calibrated annually. [§63.1366(b)(1)(ii)(C)]

(ii) Thermal incinerators. For each thermal incinerator, the permittee shall monitor the temperature of the gases exiting the combustion chamber as the site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is controlling HAP from an emission stream subject to the standards in §63.1362. [§63.1366(b)(1)(vii)]

(A) The temperature monitoring device must be accurate to within ±0.75 percent of the temperature measured in degrees Celsius or ±2.5 °C, whichever is greater. [§63.1366(b)(1)(vii)(A)]

(B) The monitoring device must be calibrated annually. [§63.1366(b)(1)(vii)(B)]

(iii) Closed-vent system visual inspections. The permittee shall comply with the requirements in either §63.1366(b)(1)(xiii)(A) or (B): [§63.1366(b)(1)(xiii)]
(A) Set the flow indicator at the entrance to any bypass line that could divert the stream away from the control device to the atmosphere to take a reading at least once every 15 minutes; or [§63.1366(b)(1)(xiii)(A)]
(B) If the bypass device valve installed at the inlet to the bypass device is secured in the closed position with a car-seal or lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. [§63.1366(b)(1)(xiii)(B)]

(2) Averaging periods. Averaging periods for parametric monitoring levels shall be established according to §63.1366(b)(2)(i) through (iii). [§63.1366(b)(2)]
(i) Except as provided in §63.1366(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 §63.1366(b)(3)(iii) recorded during the operating day or block. [§63.1366(b)(2)(i)]
(ii) The operating day or block shall be defined in the Notification of Compliance Status report. The operating day may be from midnight to midnight or another continuous 24-hour period. The operating block may be used as an averaging period only for vents from batch operations, and is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a series of consecutive batch operations. [§63.1366(b)(2)(ii)]
(iii) Monitoring values taken during periods in which the control devices are not controlling HAP from an emission stream subject to the standards in §63.1362, as indicated by periods of no flow or periods when only streams that are not subject to the standards in §63.1362 are controlled, 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. [§63.1366(b)(2)(iii)]

(3) Exceedances of operating parameters. An exceedance of an operating parameter is defined as one of the following: [§63.1366(b)(6)]
(i) If the parameter level, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration. [§63.1366(b)(6)(i)]
(ii) If the parameter level, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration. [§63.1366(b)(6)(ii)]

(4) Excursions. Excursions are defined by either of the two cases listed in §63.1366(b)(7)(i) or (ii). [§63.1366(b)(7)]
(i) When the period of control device operation is 4 hours or greater in an operating day or block and monitoring data are insufficient to constitute a valid hour of data, as defined in §63.1366(b)(7)(iii), for at least 75 percent of the operating hours. [§63.1366(b)(7)(i)]
(ii) When the period of control device operation is less than 4 hours in an operating day or block and more than 1 of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data. [§63.1366(b)(7)(ii)]
(iii) Monitoring data are insufficient to constitute a valid hour of data, as used in §63.1366(b)(7)(i) and (ii), if measured values are unavailable for any of the required 15-minute periods within the hour. [§63.1366(b)(7)(iii)]

(5) Violations. Exceedances of parameters monitored according to the provisions of §63.1366(b)(1)(ii), (iv) through (ix), and §63.1366(b)(5)(i)(A), or excursions as defined by

§63.1366(b)(7)(i) and (ii) , constitute violations of the operating limit according to §63.1366(b)(8)(i), (ii), and (iv). Exceedances of the temperature limit monitored according to the provisions of §63.1366(b)(1)(iii) constitutes a violation of the emission limit according to §63.1366(b)(8)(i), (ii), and (iv). [§63.1366(b)(8)]

(i) Except as provided in §63.1366(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. [§63.1366(b)(8)(i)]

(ii) Except as provided in §63.1366(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 service. [§63.1366(b)(8)(ii)]

(iii) Periods of time when monitoring measurements exceed the parameter values as well as periods of inadequate monitoring data do not constitute a violation if they occur during a startup, shutdown, or malfunction, and the facility operates in accordance with §63.6(e)(1). [§63.1366(b)(8)(iv)]

Recordkeeping:

(a) The permittee must keep the records specified in this section up-to-date and readily accessible. [§63.1367(b)]

(1) Each measurement of a control device operating parameter monitored in accordance with §63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of §63.1362(d). [§63.1367(b)(1)]

(2) The permittee that complies with the standards for storage vessels shall maintain up-to-date, readily accessible records of the information specified in §63.1367(b)(6)(i) through (vii) to document that HAP emissions are below the limits specified in §63.1362: [§63.1367(b)(6)]

(i) The number of batches per year for each batch process. [§63.1367(b)(6)(iii)]

(ii) The operating hours per year for continuous processes. [§63.1367(b)(6)(iv)]

(iii) The number of batches and the number of operating hours for processes that contain both batch and continuous operations. [§63.1367(b)(6)(v)]

(iv) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in §63.1365(b)(11). [§63.1367(b)(6)(vii)]

(v) Periods of planned routine maintenance as described in §63.1362(c)(5). [§63.1367(b)(6)(viii)]

(vi) A record of the determination that the conditions in §63.1365(b)(11)(iii)(D)(1) or (2) are met. [§63.1367(b)(6)(ix)]

(3) Daily schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [§63.1367(b)(7)]

(4) If the permittee elects to develop process unit groups, the permittee must keep records of the PAI and non-PAI process units in the process unit group, including records of the operating time for process units used to establish the process unit group. The permittee must also keep records of any redetermination of the primary product for the process unit group. [§63.1367(b)(9)]

(5) All maintenance performed on the air pollution control equipment. [§63.1367(b)(10)]

Reporting:

(a) The permittee shall prepare Periodic reports in accordance with §63.1368(g)(1) and (2) and submit them to the Administrator. [§63.1368(g)]

(1) Except as provided in §63.1368(g)(1)(i), the permittee shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period. [§63.1368(g)(1)]

(i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source. [§63.1368(g)(1)(i)]

(2) The permittee shall include the information in §63.1368(g)(2)(i) through (xii), as applicable. [§63.1368(g)(2)]

(i) Each Periodic report must include the information in §63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable. [§63.1368(g)(2)(i)]

(ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the information in §63.1368(g)(2)(ii)(A) through (D). [§63.1368(g)(2)(ii)]

(A) 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. [§63.1368(g)(2)(ii)(A)]

(B) Duration of excursions, as defined in §63.1366(b)(7). [§63.1368(g)(2)(ii)(B)]

(C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit. [§63.1368(g)(2)(ii)(C)]

(iii) For each vapor collection system or closed vent system with a bypass line subject to §63.1362(j)(1), records required under §63.1366(f) 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 §63.1362(j)(2), records required under §63.1366(f) 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. [§63.1368(g)(2)(iii)]

(iv) The information in §63.1368(g)(2)(iv)(A) through (D) shall be stated in the Periodic report, when applicable. [§63.1368(g)(2)(iv)]

(A) No excess emissions. [§63.1368(g)(2)(iv)(A)]

(B) No exceedances of a parameter. [§63.1368(g)(2)(iv)(B)]

(C) No excursions. [§63.1368(g)(2)(iv)(C)]

(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted. [§63.1368(g)(2)(iv)(D)]

(v) Updates to the corrective action plan. [§63.1368(g)(2)(vii)]

(vi) Records of process units added to each process unit group, if applicable. [§63.1368(g)(2)(ix)]

(vii) Records of redetermination of the primary product for a process unit group. [§63.1368(g)(2)(x)]

(viii) For each inspection conducted in accordance with §63.1366(h)(2) or (3) during which a leak is detected, the records specify in §63.1367(h)(4) must be included in the next Periodic report. [§63.1368(g)(2)(xi)]

(b) Notification of process change. [§63.1368(h)]

(1) Except as specified in §63.1368(h)(2), whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the permittee shall submit the information specified in §63.1368(h)(1)(i) through (iv) with the next Periodic report required under §63.1368(g). For the purposes of this section, a process change means the startup of a new process, as defined in §63.1361. [§63.1368(h)(1)]

(i) A brief description of the process change; [§63.1368(h)(1)(i)]

(ii) A description of any modifications to standard procedures or quality assurance procedures; [§63.1368(h)(1)(ii)]

(iii) Revisions to any of the information reported in the original Notification of Compliance Status report under §63.1368(f); and [§63.1368(h)(1)(iii)]

(iv) Information required by the Notification of Compliance Status report under §63.1368(f) for changes involving the addition of processes or equipment. [§63.1368(h)(1)(iv)]

(2) The permittee must submit a report 60 days before the scheduled implementation date the following: [§63.1368(h)(2)]

(i) Any change in the activity covered by the Precompliance report. [§63.1368(h)(2)(i)]

(c) For each storage vessel subject to control requirements: [§63.1368(g)(2)(v)]

(1) Actual periods of planned routine maintenance during the reporting period in which the control device does not meet the specifications of §63.1362(c)(5); and [§63.1368(g)(2)(v)(A)]

(2) Anticipated periods of planned routine maintenance for the next reporting period. [§63.1368(g)(2)(v)(B)]

PERMIT CONDITION (EU0023 through EU0028)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Wastewater and Wastewater Tanks subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

Wastewater and wastewater tanks

(a) The permittee of each affected source shall comply with the requirements of §§63.132 through 63.147. [§63.1362(d)]

(1) The permittee shall comply with the requirements in §63.132(a)(2), no later than December 23, 2003.[§63.132(a) and §63.1362(d)(11)]

(i) For wastewater streams that are Group 1 for Table 9 compounds, comply with §63.132(a)(2)(i).[§63.132(a)(2)]

(A) Comply with the applicable requirements for wastewater tanks as specified in §63.133 through §63.137 of this subpart, except as provided in paragraphs §63.132(a)(2)(i)(A) and (a)(2)(i)(B). .[§63.132(a)(2)(i)]

(1) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions. .[§63.132(a)(2)(i)(A)]

(2) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices. .[§63.132(a)(2)(i)(B)]

(2) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the permittee shall comply with the requirements of either §63.133(a)(1) or (a)(2) as specified in table 10 of this subpart. [§63.133(a)] Note: Table 10 is presented in the Statement of Basis

(i) The permittee shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged, the permittee shall comply with the requirements specified in §63.133(a)(2). .[§63.133(a)(1)]

(ii) The permittee shall comply with the requirements in §63.133(b), (g) and (h) and shall operate and maintain the emission control technique listed in §63.133(a)(2)(i). .[§63.133(a)(2)]

(A) A fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device. .[§63.133(a)(2)(i)]

(3) If the permittee elects to comply with the requirements of §63.133(a)(2)(i), the fixed roof shall meet the requirements of §63.133(b)(1).[§63.133(b)]

(i) The fixed-roof shall meet the following requirements: [§63.133(b)(1)]

(A) 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 §63.1366(h), §63.1367(f), and §63.1368(g)(2)(iii) and (ix) of this subpart. [§63.133(b)(1)(i) and §63.1362(d)(16)]

(B) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. [§63.133(b)(1)(ii)]

(4) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.139 of this subpart.[§63.133(b)(2)]

(5) Except as provided in §63.133(b)(4), the closed-vent system shall be inspected in accordance with the requirements of §63.148 of this subpart.[§63.133(b)(3)]

(6) Each wastewater tank shall be inspected for control equipment failures as defined in§63.133(g)(1) according to the schedule in §63.133(g)(2) and (g)(3).[§63.133(g)]

(i) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in §63.133(g)(1)(ix).[§63.133(g)(1)]

(A) A gasket, joint, lid, cover, or door has a crack or gap, or is broken. [§63.133(g)(1)(ix)]

(ii) The permittee shall inspect for the control equipment failures in §63.133(g)(1)(ix) initially, and semi-annually thereafter.[§63.133(g)(3)]

(7) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 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 this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the permittee may utilize up to 2 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 vessel will be emptied as soon as practical. [§63.133(h)]

(8) The permittee shall treat the wastewater stream or residual in a unit identified in, and complying with, §63.138(h)(1). These units are exempt from the design evaluation or performance tests requirements specified in §63.138(a)(3) and §63.138(j) of this subpart, and from the monitoring requirements specified in §63.132(a)(2)(iii) and §63.132(b)(3)(iii) of this subpart, as well as recordkeeping and reporting requirements associated with monitoring and performance tests. [§63.138(h)]

(i) The wastewater stream 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; [§63.138(h)(1)]

(9) *Residuals.* For each residual removed from a Group 1 wastewater stream, the permittee shall control for air emissions by complying with §§63.133–137 of this subpart and by complying with §63.138(k)(4). [§63.138(k)]

(i) Comply with the requirements for RCRA treatment options specified in §63.138(h) of this subpart.[§63.138(k)(4)]

Wastewater tank control devices.

(a) For each control device or combination of control devices used to comply with the provisions in §§63.133 through 63.138 of this subpart, the permittee shall operate and maintain the control device or combination of control devices in accordance with the requirements of §63.139(b) through (f). [§63.139(a)]

(b) Whenever organic hazardous air pollutants emissions are vented to a control device which is used to comply with the provisions of this subpart, such control device shall be operating. [§63.139(b)]

(c) The control device shall be designed and operated in accordance with §63.139(c)(1), (c)(2), (c)(3),(c)(4), or (c)(5). .[§63.139(c)]

(1) An enclosed combustion device shall meet the conditions in §63.139(c)(1)(i), alone or in combination with other control devices..[§63.139(c)(1)]

(i) Reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device by 95 percent by weight or greater; .[§63.139(c)(1)(i)]

(d) Except as provided in §63.139(d)(4), a permittee shall demonstrate that each control device or combination of control devices achieves the appropriate conditions specified in §63.139(c) by using one or more of the methods specified in §63.139(d)(1), (d)(2), or (d)(3). .[§63.139(d)]

(1) Performance tests conducted using the test methods and procedures specified in §63.145(i) of this subpart for control devices,. Or, [§63.139(d)(1)]

(2) A permittee using any control device specified in §63.139(d)(4)(i) through (d)(4)(iv) is exempt from the requirements in §63.139(d)(1) through (d)(3) and from the requirements in §63.6(f) of subpart A of this part, and from the requirements of §63.139(e) .[§63.139(d)(4)]

(i) A hazardous waste incinerator for which the owner or operator 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. [§63.139(d)(4)(iv)]

(e) The permittee of a control device that is used to comply with the provisions of this section shall monitor the control device in accordance with §63.143 of this subpart. .[§63.139(e)]

(f) Except as provided in §63.140 of this subpart, 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 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect. [§63.139(f)]

(1) 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 §63.101 of subpart F of this part, 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. [§63.140(a)]

(2) 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 Group 1 wastewater streams or residuals removed from Group 1 wastewater streams. [§63.140(b)]

(3) 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 permittee who uses this provision shall comply with the requirements of §63.147(b)(7) to document the reasons that the delay of repair was necessary.[§63.140(c)]

(4) The permittee shall keep in a readily accessible location the records specified in §63.147(b)(1) and (7). [§63.147(b)]

(i) A record that each waste management unit inspection required by §§63.133 through 63.137 of this subpart was performed. .[§63.147(b)(1)]

(ii) Documentation of a decision to use a delay of repair due to unavailability of parts, as specified in §63.140(c), shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept on site and when the manufacturer promised delivery), and the date when repair was completed. [§63.147(b)(7)]

<u>Monitoring:</u>

(a) To provide evidence of continued compliance with the standard, the permittee shall install, operate, and maintain monitoring devices as specified in §63.1366. During the initial compliance demonstration, maximum or minimum operating parameter levels, or other design and operating characteristics, 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, as applicable, shall be used to establish the operating parameter level or characteristic. [§63.1366(a)]

(b) Monitoring for control devices [§63.1366(b)]

(1) 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 paragraphs §63.1366(b)(1)(ii) through (xiii), and are summarized in Table 3 of this subpart. [§63.1366(b)(1)]

(i) Scrubbers. For affected sources using liquid scrubbers, the permittee shall establish a minimum scrubber liquid flow rate or pressure drop as a site-specific operating

parameter which must be measured and recorded at least once every 15 minutes during the period in which the scrubber is controlling HAP from an emission stream as required by the standards in §63.1362. If the scrubber uses a caustic solution to remove acid emissions, the pH of the effluent scrubber liquid shall also be monitored once a day. The minimum scrubber liquid flow rate or pressure drop shall be based on the conditions under which the initial compliance demonstration was conducted. [§63.1366(b)(1)(ii)]

(A) The monitoring device used to determine the pressure drop shall be certified by the manufacturer to be accurate to within a gage pressure of ±10 percent of the maximum pressure drop measured. [§63.1366(b)(1)(ii)(A)]

(B) The monitoring device used for measurement of scrubber liquid flowrate shall be certified by the manufacturer to be accurate to within ±10 percent of the design scrubber liquid flowrate. [§63.1366(b)(1)(ii)(B)]

(C) The monitoring device shall be calibrated annually. [§63.1366(b)(1)(ii)(C)]

(ii) Thermal incinerators. For each thermal incinerator, the permittee shall monitor the temperature of the gases exiting the combustion chamber as the site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is controlling HAP from an emission stream subject to the standards in §63.1362. [§63.1366(b)(1)(vii)]

(A) The temperature monitoring device must be accurate to within ±0.75 percent of the temperature measured in degrees Celsius or ±2.5 °C, whichever is greater. [§63.1366(b)(1)(vii)(A)]

(B) The monitoring device must be calibrated annually. [§63.1366(b)(1)(vii)(B)]

(iii) Closed-vent system visual inspections. The permittee shall comply with the requirements in either §63.1366(b)(1)(xiii)(A) or (B): [§63.1366(b)(1)(xiii)]

(A) Set the flow indicator at the entrance to any bypass line that could divert the stream away from the control device to the atmosphere to take a reading at least once every 15 minutes; or [§63.1366(b)(1)(xiii)(A)]

(B) If the bypass device valve installed at the inlet to the bypass device is secured in the closed position with a car-seal or lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. [§63.1366(b)(1)(xiii)(B)]

(2) Averaging periods. Averaging periods for parametric monitoring levels shall be established according to §63.1366(b)(2)(i) through (iii). [§63.1366(b)(2)]

(i) Except as provided in §63.1366(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 §63.1366(b)(3)(iii) recorded during the operating day or block. [§63.1366(b)(2)(i)]

(ii) The operating day or block shall be defined in the Notification of Compliance Status report. The operating day may be from midnight to midnight or another continuous 24-hour period. The operating block may be used as an averaging period only for vents from batch operations, and is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a series of consecutive batch operations. [§63.1366(b)(2)(ii)]

(iii) Monitoring values taken during periods in which the control devices are not controlling HAP from an emission stream subject to the standards in §63.1362, as indicated by periods of no flow or periods when only streams that are not subject to the standards in §63.1362 are controlled, 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. [§63.1366(b)(2)(iii)]

(3) Exceedances of operating parameters. An exceedance of an operating parameter is defined as one of the following: [§63.1366(b)(6)]
   (i) If the parameter level, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration. [§63.1366(b)(6)(i)]
   (ii) If the parameter level, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration. [§63.1366(b)(6)(ii)]

(4) Excursions. Excursions are defined by either of the two cases listed in §63.1366(b)(7)(i) or (ii). [§63.1366(b)(7)]
   (i) When the period of control device operation is 4 hours or greater in an operating day or block and monitoring data are insufficient to constitute a valid hour of data, as defined in §63.1366(b)(7)(iii), for at least 75 percent of the operating hours. [§63.1366(b)(7)(i)]
   (ii) When the period of control device operation is less than 4 hours in an operating day or block and more than 1 of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data. [§63.1366(b)(7)(ii)]
   (iii) Monitoring data are insufficient to constitute a valid hour of data, as used in §63.1366(b)(7)(i) and (ii), if measured values are unavailable for any of the required 15-minute periods within the hour. [§63.1366(b)(7)(iii)]

(5) Violations. Exceedances of parameters monitored according to the provisions of §63.1366(b)(1)(ii), (iv) through (ix), and §63.1366(b)(5)(i)(A), or excursions as defined by §63.1366(b)(7)(i) and (ii) , constitute violations of the operating limit according to §63.1366(b)(8)(i), (ii), and (iv). Exceedances of the temperature limit monitored according to the provisions of §63.1366(b)(1)(iii) constitutes a violation of the emission limit according to §63.1366(b)(8)(i), (ii), and (iv). [§63.1366(b)(8)]
   (i) Except as provided in §63.1366(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. [§63.1366(b)(8)(i)]
   (ii) Except as provided in §63.1366(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 service. [§63.1366(b)(8)(ii)]
   (iii) Periods of time when monitoring measurements exceed the parameter values as well as periods of inadequate monitoring data do not constitute a violation if they occur during a startup, shutdown, or malfunction, and the facility operates in accordance with §63.6(e)(1). [§63.1366(b)(8)(iv)]

(c) For each waste management unit, treatment process, or control device used to comply with §63.1362(d), the permittee shall comply with the procedures specified in §63.143 of subpart G of this part, except that when the procedures to request approval to monitor alternative parameters according to the procedures in §63.151(f) are referred to in §63.143(d)(3), the procedures in §63.1366(b)(4) shall apply for the purposes of this subpart. [§63.1366(b)(1)(xii)]

Recordkeeping:

(a) The permittee must keep the records specified in this section up-to-date and readily accessible. [§63.1367(b)]

(1) Each measurement of a control device operating parameter monitored in accordance with §63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of §63.1362(d). [§63.1367(b)(1)]
(2) The permittee that complies with the standards for wastewater shall maintain up-to-date, readily accessible records of the information specified in §63.1367(b)(6)(i) through (vii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in §63.1362: [§63.1367(b)(6)]
  (i) The wastewater concentrations and flow rates per POD and process. [§63.1367(b)(6)(ii)]
  (ii) The number of batches per year for each batch process. [§63.1367(b)(6)(iii)]
  (iii) The operating hours per year for continuous processes. [§63.1367(b)(6)(iv)]
  (iv) The number of batches and the number of operating hours for processes that contain both batch and continuous operations. [§63.1367(b)(6)(v)]
  (v) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in §63.1365(b)(11). [§63.1367(b)(6)(vii)]
  (vi) Periods of planned routine maintenance as described in §63.1362(c)(5). [§63.1367(b)(6)(viii)]
  (vii) A record of the determination that the conditions in §63.1365(b)(11)(iii)(D)(1) or (2) are met. [§63.1367(b)(6)(ix)]
(3) Daily schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [§63.1367(b)(7)]
(4) If the permittee elects to develop process unit groups, the permittee must keep records of the PAI and non-PAI process units in the process unit group, including records of the operating time for process units used to establish the process unit group. The permittee must also keep records of any redetermination of the primary product for the process unit group. [§63.1367(b)(9)]
(5) All maintenance performed on the air pollution control equipment. [§63.1367(b)(10)]

Reporting:

(a) The permittee shall prepare Periodic reports in accordance with §63.1368(g)(1) and (2) and submit them to the Administrator. [§63.1368(g)]
  (1) Except as provided in §63.1368(g)(1)(i), the permittee shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period. [§63.1368(g)(1)]
    (i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source. [§63.1368(g)(1)(i)]
  (2) The permittee shall include the information in §63.1368(g)(2)(i) through (xii), as applicable. [§63.1368(g)(2)]
    (i) Each Periodic report must include the information in §63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable. [§63.1368(g)(2)(i)]
    (ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic

report must include the information in §63.1368(g)(2)(ii)(A) through (D). [§63.1368(g)(2)(ii)]

(A) 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. [§63.1368(g)(2)(ii)(A)]

(B) Duration of excursions, as defined in §63.1366(b)(7). [§63.1368(g)(2)(ii)(B)]

(C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit. [§63.1368(g)(2)(ii)(C)]

(iii) For each vapor collection system or closed vent system with a bypass line subject to §63.1362(j)(1), records required under §63.1366(f) 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 §63.1362(j)(2), records required under §63.1366(f) 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. [§63.1368(g)(2)(iii)]

(iv) The information in §63.1368(g)(2)(iv)(A) through (D) shall be stated in the Periodic report, when applicable. [§63.1368(g)(2)(iv)]

(A) No excess emissions. [§63.1368(g)(2)(iv)(A)]

(B) No exceedances of a parameter. [§63.1368(g)(2)(iv)(B)]

(C) No excursions. [§63.1368(g)(2)(iv)(C)]

(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted. [§63.1368(g)(2)(iv)(D)]

(v) Updates to the corrective action plan. [§63.1368(g)(2)(vii)]

(vi) Records of process units added to each process unit group, if applicable. [§63.1368(g)(2)(ix)]

(vii) Records of redetermination of the primary product for a process unit group. [§63.1368(g)(2)(x)]

(viii) For each inspection conducted in accordance with §63.1366(h)(2) or (3) during which a leak is detected, the records specify in §63.1367(h)(4) must be included in the next Periodic report. [§63.1368(g)(2)(xi)]

(b) Notification of process change. [§63.1368(h)]

(1) Except as specified in §63.1368(h)(2), whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the permittee shall submit the information specified in §63.1368(h)(1)(i) through (iv) with the next Periodic report required under §63.1368(g). For the purposes of this section, a process change means the startup of a new process, as defined in §63.1361. [§63.1368(h)(1)]

(i) A brief description of the process change; [§63.1368(h)(1)(i)]

(ii) A description of any modifications to standard procedures or quality assurance procedures; [§63.1368(h)(1)(ii)]

(iii) Revisions to any of the information reported in the original Notification of Compliance Status report under §63.1368(f); and [§63.1368(h)(1)(iii)]

(iv) Information required by the Notification of Compliance Status report under §63.1368(f) for changes involving the addition of processes or equipment. [§63.1368(h)(1)(iv)]

(2) The permittee must submit a report 60 days before the scheduled implementation date the following: [§63.1368(h)(2)]

(i) Any change in the activity covered by the Precompliance report. [§63.1368(h)(2)(i)]

PERMIT CONDITION (EU0001 through EU0028)-004 and (EU0029 through EU0049)-001

10 CSR 10-6.060 Construction Permits Required
Construction Permit 092009-007, Issued September 9, 2009

Operational Limitations:

1. The permittee shall install and operate a thermal oxidizer to control process emissions (PY – 06). The thermal oxidizer shall be operated at all times during Pyrrole, XXXXX, and 320I production. [Special Condition #2.A.]
2. The thermal oxidizer shall be operated at a temperature of at least 1500º Fahrenheit, based on a 15-minute rolling average, and shall be equipped with a continuous temperature monitoring system. The temperature monitoring system shall alert the operator whenever the oxidizer temperature drops below 1500º Fahrenheit. [Special Condition #2B.].
3. The permittee shall install and operate scrubbers to control process emissions (PY – 06). The scrubbers shall be operated at all times during Pyrrole, XXXXX, and 320I production. [Special Condition #3.A.].
4. The permittee shall install the scrubbers upstream and downstream of the thermal oxidizers. The downstream scrubber shall be in operation at all times when the thermal oxidizer is in operation. Both scrubbers shall be maintained and operated according to manufacturer's design specifications. [Special Condition #3.B.]
5. The permittee shall install and operate baghouses to control emissions from the raw material and product handling systems (PY – 03, PY-05, PY – 11, PY – 14, and PY – 15). [Special Condition #4.A.]
6. The permittee shall install and operate HEPA filter systems downstream of the baghouses as specified in the permit application. [Special Condition #4.B.]
7. The baghouses shall be equipped with gauges or meters that indicate the pressure drop across them. The gauges or meters shall be located such that they can easily be observed by the Department of Natural Resources' personnel. [Special Condition #4.C.]
8. Replacement bags and filters shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature, acidic and alkali resistance, abrasion resistance, etc.). [Special Condition #4.F.]
9. The permittee shall install and operate a caustic scrubber to control emissions from the tank farm (PY – 09). [Special Condition #5.A.]
10. This scrubber shall be in use at all times when fumes from the Pyrrole/XXXXX/320I process raw material storage tanks are being directed to the scrubber. The scrubber shall be maintained and operated according to manufacturer's design specifications. [Special Condition #5.B.]
11. the permittee shall control the emissions from the XXXXX waste storage tank (PY-13) using the North Waste Management Area's hazardous waste incinerators as specified in the permit. [Special Condition #6.A.]
12. The hazardous waste incinerators shall be operated and maintained in accordance with the manufacturer's specifications and the MACT standard 40 CFR Part 63 Subpart EEE-National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. [Special Condition #6.B.]
13. If a continuing situation of demonstrated nuisance odors exists in violation of 10 CSR 10-3.090, *Restriction of Emissions of Odors*, the Director may require the permittee to submit a corrective action plan within ten (10) days adequate to timely and significantly mitigate the odors. The

permittee shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan shall be a violation of the permit. [Special Condition #9]

Monitoring/Record Keeping:

1. The permittee shall monitor and record the operating pressure drop across the baghouse at least once a day during periods of operation. The operating pressure drop shall be maintained in accordance with the manufacturer's performance warranty. [Special Condition #4.D.]
2. The permittee shall monitor the operating pressure drop of the HEPA filter systems per standard operating procedure and replace the filters as needed. [Special Condition #4.E.]
3. The permittee shall maintain an operating and maintenance log for the baghouses, HEPA filters, scrubbers, and thermal oxidizers that shall include the following: [Special Condition #7]
4. Incidents of malfunction; with impact on emissions, duration of event, probable cause, and corrective actions; and . [Special Condition #7A.]
5. Maintenance activities; with inspection schedule, repair actions, and replacements, etc. . [Special Condition #7B]
6. Attachment D contains a log including these record keeping requirements. This log, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
7. The permittee shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' (DNR) personnel upon request. [Special Condition #8]

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

PERMIT CONDITION (EU0050)-001

10 CSR 10-6.060 Construction Permits Required
Construction Permit 022006-005, Issued February 6, 2006

Operational Limitation:

1. The permittee shall operate the wet scrubber (PY-16) associated with the potassium methoxide (KOCH3) processing to control process emissions. The wet scrubber shall be in operation at all times KOCH3 processing equipment is in use. The wet scrubber shall be operated and maintained in accordance with the manufacturer's specifications.

Monitoring/Record Keeping:

1. The permittee shall maintain an operating, maintenance and inspection log for the wet scrubber which shall include the following:
   a) Incidents of malfunction(s) including the date(s) and duration of the event, the probable cause, any corrective actions taken and the impact on emissions due to the malfunction;
   b) Any maintenance activities conducted on the unit, such as replacement of equipment, etc.; and
   c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
2. Attachment D contains a log including these record keeping requirements. This log, or an equivalent created by the permittee, must be used to certify compliance with this requirement.

Reporting:
The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

PERMIT CONDITION (EU0029 through EU0031 and EU0047 through EU0049, and EU0050)-002

10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

Emission Limitation:
1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

Monitoring/Record Keeping/Reporting:
As detailed in Core Permit Requirements.

THIMET/COUNTER Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0051	TC01/TC-02	Process Section 130	Condensation Seal Tank (process #631-004), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
EU0052	TC01/TC-02	Process Section 140	
EU0053	TC01/TC-02/TC-03/TC-03A	Ethanol Storage Tank (process #110-014), 32,400 gallon capacity, installed 1993	Storage Seal Tank (process #631-006), Open Flare (process #631-012), Standby Flare (process #631-050), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
EU0054	TC01/TC-02/TC-03/TC-03A	Waste Holding Section 633	
EU0055	TC01/TC-02/TC-04	Process Section 120	DETA Seal Tank (process #120-017), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019), and Venturi Scrubber (process #631-018)
EU0056	TC01/TC-02/TC-03/TC-03A	Formaldehyde Storage Tank (process #110-004), 30,600 gallon capacity, installed 1976	Storage Seal Tank (process #631-006), Open Flare (process #631-012), Standby Flare (process #631-050), "D" Incinerator (process #632-001), Packed Tower Stack (process #633-000), oxidation tower (process #633-019)
EU0057	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank (process #150-001), 250,000 gallon capacity, installed 1976	
EU0058	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank (process #150-003A), 41,600 gallon capacity, installed 1976	
EU0059	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank (process #150-003B), 41,600 gallon capacity, installed 1976	

PERMIT CONDITION EU0053-001

10 CSR 10-6.070 New Source Performance Standards
40 CFR Part 60, Subpart A General Provisions and 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

Monitoring/Recordkeeping:

The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [§60.116b(b)]

PERMIT CONDITION (EU0051, EU0052 and EU0054 through EU0059)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM. The individual requirements for each type of equipment is detailed in following Permit Conditions.

General Conditions:

Emission Limitations/Operating Limitations:

(a) On and after December 23, 2003, the permittee of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in §63.1363, as summarized in Table 2 to Subpart MMM of Part 63. [§63.1362(a)]

(b) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions regarding construction and reconstruction in §63.5 of subpart A of this part. [§63.1367(a)(5)]

(c) Opening of a safety device. Opening of a safety device, as defined in §63.1361, is allowed at any time conditions require it to avoid unsafe conditions. [§63.1362(i)]

(d) Closed-vent systems. The permittee of a 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 §63.1362(b) through (d) shall comply with the requirements of Table 3 of this subpart and paragraph §63.1362(j)(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. [§63.1362(j)]

(1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in §63.1367(f)(1). 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 [§63.1362(j)(1)]

(2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in §63.1367(f)(2). [§63.1362(j)(2)]

Recordkeeping:

(a) The permittee shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in §63.1367(a)(1) through (5). [§63.1367(a)]

(1) The permittee of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part. [§63.1367(a)(1)]

Reporting:

(a) The permittee shall comply with the reporting requirements of §63.1368(b) through (l). The permittee shall also comply with applicable paragraphs of §§63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart. [§63.1368(a)]

(b) The permittee who is subject to §63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to these standards. The application shall be prepared in accordance with §63.5(d) of subpart A of this part. [§63.1368(c)]

Startup, Shutdown, Malfunction:

SSM Plan:

The permittee shall develop a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The permittee of an affected source shall keep the current and superseded versions of this plan onsite, as specified in §63.6(e)(3)(v) of subpart A of this part. The permittee shall keep the startup, shutdown, and malfunction records specified in paragraphs §63.1367(a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in §63.1368(i). [§63.1367(a)(3)]

(i) The permittee shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with subpart MMM of this part, as specified in §63.6(e)(3)(iii). [§63.1367(a)(3)(i)]

(ii) The permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subpart MMM of this part. [§63.1367(a)(3)(ii)]

(iii) For each startup, shutdown, or malfunction, the permittee shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in §63.6(e)(3)(iii) of subpart A of this part; alternatively, the permittee shall record any actions taken that are not consistent with the plan, as specified in §63.6(e)(3)(iv) of subpart A of this part. [§63.1367(a)(3)(iii)]

Reporting:

For the purposes of subpart MMM of this part, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under §63.1368(g) instead of the schedule specified in §63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in §63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the permittee or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time the permittee takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee shall submit an immediate startup, shutdown, and malfunction report as specified in §63.10(d)(5)(ii) of subpart A of this part. [§63.1368(i)]

PERMIT CONDITION (EU0051, EU0052 and EU0054 through EU0059)-002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM.

Standards for Equipment Leaks:

Emission Limitation/Monitoring-General Equipment Leaks:

(a) General equipment leak requirements. [§63.1363(a)]

(1) The provisions of this section apply to "equipment" as defined in §63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section. [§63.1363(a)(1)]

(2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: [§63.1363(a)(2)]

(i) 40 CFR Part 60. [§63.1363(a)(2)(i)]

(ii) 40 CFR Part 61. [§63.1363(a)(2)(ii)]

(3) The provisions in §63.1(a)(3) of subpart A of this part do not alter the provisions in §63.1363(a)(2). [§63.1363(a)(4)]

(4) Lines and equipment not containing process fluids are not subject to the provisions of §63.1363. 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. [§63.1363(a)(5)]

(5) The provisions of §63.1363 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 this subpart MMM. [§63.1363(a)(6)]

(6) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. 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 15 calendar days of the end of each monitoring period for that component. [§63.1363(a)(7)]

(7) Equipment that is in vacuum service is excluded from the requirements of this section. [§63.1363(a)(8)]

(8) 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 this section if it is identified as required in §63.1363(g)(9). [§63.1363(a)(9)]

(9) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c) of subpart H of this part, the following requirements apply: [§63.1363(a)(10)]

(i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1363(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 §63.1363(e)(7)(iii), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply with §63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring. [§63.1363(a)(10)(ii)]

(iii) The identification on equipment, except as specified in §63.1363(a)(10)(ii), may be removed after it has been repaired. [§63.1363(a)(10)(iii)]

(b) The permittee shall comply with the provisions of subpart H of this part as presented below. When the term "process unit" is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes. [§63.1363(b)]

Standards: Compressors.

(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 §63.1363(a) of this subpart 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)]

(i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]

(ii) 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 §63.1362; or [§63.164(b)(2)]

(iii) 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)]

(5) Seal systems [§63.164(e)]

(i) 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)]

(ii) 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)]

(6) 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)]

(7) Leak repair [§63.164(g)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.164(g)(1)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.164(g)(2)]

(8) 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 §63.1362 of this subpart. [§63.164(h)]

(9) Any compressor that is designated, as described in §63.1363(g), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i) and §63.1363(b)(1)(vii)]

(i) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and [§63.164(i)(1)]

(ii) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Administrator. [§63.164(i)(2)]

Standards: 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 parts per million above background except as provided in §63.165(b), as measured by the method specified in §63.180(c) of this subpart. [§63.165(a)]

(2) Pressure releases [§63.165(b)]

(i) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(b)(1)]

(ii) No later than 5 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 parts per million above background, as measured by the method specified in §63.180(c) of this subpart. [§63.165(b)(2)]

(3) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.1362 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]

(4) Rupture disks [§63.165(d)]

(i) 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)]

(ii) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(d)(2)]

Standards: 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 §63.1363(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a) and §63.1363(b)(1)(i)]

(2) Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]

(i) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]

(ii) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]

(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.1362; or [§63.166(b)(3)]

(iv) 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)]

(A) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, subpart G

applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]

(C) 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: 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 5 calendar days by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), 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), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.169(a)]

(2) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]

(3) Leaks [§63.169(c)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.169(c)(1)]

(ii) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.169(c)(2)]

(iii) 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)]

(4) First attempts at repair include, but are not limited to, the practices described under §§63.1363(c) and 63.1363(e) of this subpart, for pumps and valves, respectively. [§63.169(d), §63.1363(b)(1)(iii), and §63.1363(b)(1)(v)]

Standards: Delay of repair.

(1) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist: [§63.1363(b)(3)(i)]

(i) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1363(b)(3)(i)(A)]

(ii) 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. [§63.1363(b)(3)(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)]

(i) 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)]

(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.1362. [§63.171(c)(2)]

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [§63.171(e)]

Standards: Closed-vent systems and control devices.

(1) Permittees of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]

(2) 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)]

(i) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]

(ii) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172 (f)(2)(i)]

(B) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]

(3) Each closed-vent system shall be inspected according to the procedures in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.172(g)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i) of this section. [§63.172(h)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.172(h)(1)]

(ii) 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)]

(5) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the 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 process unit shutdown. [§63.172(i)]

(6) 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)]

(i) 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) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]

(ii) 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)]

(iii) 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)]

(7) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. [§63.172(m)]

(8) After the compliance dates specified in §63.100 of subpart F of this part, the permittee of any control device subject to this subpart 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 this subpart, 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 this subpart. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1363(h). [§63.172(n)]

Standards: Connectors in gas/vapor service and in light liquid service.

(1) The permittee of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1363(a) and §63.1363(f) of this subpart , at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(a) and §63.1363(b)(1)(i)]

(i) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v). [§63.174(a)(1)]

(ii) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. [§63.174(a)(2)]

(2) The permittee shall monitor for leaks at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(b) and §63.1363(b)(3)(iii)(A)]

(i) 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. [§63.1363(b)(3)(iii)(C)]

(ii) 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 last required monitoring period, monitoring shall be performed once every 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period. [§63.1363(b)(3)(iii)(D)]

(iii) The permittee shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in §63.1363(b)(3)(iii)(D), the first 4 years specified in §63.1363(b)(3)(iii)(G), or the entire 8 years specified in §63.1363(b)(3)(iii)(G). At the end of that 2-year monitoring period, the permittee shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the permittee may again elect to monitor in accordance with §63.1363(b)(3)(iii)(D) or (G), as applicable. [§63.1363(b)(3)(iii)(E)]

(iv) If the permittee complying with the requirements of §63.1363(b)(3)(iii)(D) or (G) for a group of processes determines that 1 percent or greater of the connectors are leaking, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of §63.1363(b)(3)(iii)(D) or (G) after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking. [§63.1363(b)(3)(iii)(F)]

(v) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 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 §63.1363(b)(3)(iii)(D), (E), or (F). [§63.1363(b)(3)(iii)(G)]

(3) Connectors

(i) Open connectors

(A) 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 3 months after being returned to organic hazardous air pollutants 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)]

(B) As an alternative to the requirements in §63.174(c)(1)(i), a 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 §63.1363(b)(3)(iii)(C) through (G), 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)]

(C) A permittee may switch alternatives described in §63.174(c)(1) (i) and (ii) at the end of the current monitoring period he is in, provided that it is reported as required in §63.1363(h) of this subpart 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) and §63.1363(b)(1)(viii)]

(ii) As an alternative to the requirements of §63.1363(b)(3)(iii)(C) through (G), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in §63.174(c)(2)(iv) may: [§63.174(c)(2)]

(A) Comply with the requirements of §63.169 of this subpart, and [§63.174(c)(2)(i)]

(B) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d). [§63.174(c)(2)(ii)]

(C) The provisions of §63.174(c)(2) apply to screwed connectors installed before November 10, 1997. [§63.174(c)(2)(iv)]

(4) 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 §63.1363(f) and in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [§63.174(d)]

(5) For use in determining the monitoring frequency, as specified in §63.1363(b)(3)(iii)(C) through (G), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]

(i) For the first monitoring period, use the following equation: [§63.174(i)(1)]

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

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

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

C_C = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then C_C = 0.

(ii) For subsequent monitoring periods, use the following equation: [§63.174(i)(2)]

$$\%C_L = \left[\frac{(C_L - C_{AN})}{(C_t + C_c)}\right] \times 100$$

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1363(b)(3)(iii)(C) through (G) and §63.174 (c), not to exceed 2 percent of the total connector population, C_t.

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

C_C = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(6) Optional credit for removed connectors. If a permittee eliminates a connector subject to monitoring under §63.1363(b)(3)(iii)(C) through (G), 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). [§63.174(j)]

(i) The connector was welded after November 10, 1997. [§63.174(j)(1)]

(ii) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]

(iii) Welds created after November 10, 1997 but before June 23, 1999 are monitored or tested by 3 months after December 23, 2003. [§63.174(j)(3)]

(iv) Welds created after June 23, 1999 are monitored or tested within 3 months after being welded. [§63.174(j)(4)]

(v) 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 this subpart. [§63.174(j)(5)]

Alternative means of emission limitation: Batch processes.

(1) As an alternative to complying with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b), § 63.171, and §63.174, the permittee of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in §63.178(b) and (c), with the differences specified in §63.1363(b)(3)(iv), or the permittee may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The permittee may switch among the alternatives provided the change is documented as specified in §63.1363(g). [§63.178(a)]

(2) The following requirements shall be met if a permittee elects to use pressure testing of process equipment to demonstrate compliance with this subpart. A permittee who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.1363(c), §63.1363(e), and §63.169 of this subpart. [§63.178(b)]

(i) Each time equipment is reconfigured for production of a different product or intermediate, the process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service. [§63.178(b)(1)]
  (A) When the process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment. [§63.178(b)(1)(i)]
  (B) Each process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year. [§63.178(b)(1)(ii)]
  (C) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate. [§63.178(b)(1)(iii)]
(ii) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart. [§63.178(b)(2)]
(iii) Pressure tests
  (A) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss. [§63.178(b)(3)(i)]
  (B) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss. [§63.178(b)(3)(ii)]
(iv) Leaks
  (A) If a leak is detected, it shall be repaired and the process equipment shall be retested before start-up of the process. [§63.178(b)(4)(i)]
  (B) If a process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in §63.178(d) are met. [§63.178(b)(4)(ii)]

(3) The following requirements shall be met if a permittee elects to monitor the equipment to detect leaks by the method specified in §63.180(b), with the differences specified in §63.180(b)(3)(v), of this subpart to demonstrate compliance with this subpart. [§63.178(c)]
(i) The permittee shall comply with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b),, and §§63.172 through 63.174 of this subpart. [§63.178(c)(1)]
(ii) The equipment shall be monitored for leaks by the method specified in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.178(c)(2)]
(iii) The equipment shall be monitored for leaks as specified below: [§63.178(c)(3)]
  (A) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit. [§63.178(c)(3)(i)]
  (B) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart. [§63.178(c)(3)(ii)]

(C) Equipment other than connectors shall be monitored quarterly. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating. [§63.178(c)(3)(iii) and §63.1363(b)(3)(iv)(B)]

(D) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. A permittee may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating. [§63.178(c)(3)(iv)]

(iv) If 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 §63.178(d). [§63.178(c)(4)]

(4) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met: [§63.178(d)]

(i) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted. [§63.178(d)(1)]

(ii) The repair is made no later than 10 calendar days after delivery of the replacement equipment. [§63.178(d)(2)]

(c) Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1363(c)]

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service. [§63.1363(c)(1)]

(2) Monitoring [§63.1363(c)(2)]

(i) Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in §63.180(b), except as provided in §63.1363(f), and §63.1363(c)(5) through (9). [§63.1363(c)(2)(i)]

(ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b) of subpart H of this part, that defines a leak is: [§63.1363(c)(2)(ii)]

(A) For agitators, an instrument reading of 10,000 parts per million or greater. [§63.1363(c)(2)(ii)(A)]

(B) For pumps, an instrument reading of 2,000 parts per million or greater. [§63.1363(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 seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1363(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1363(c)(2)(iii)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(2)(iii)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(2)(iii)(B)]

(3) Repair provisions. [§63.1363(c)(3)]

(i) When a leak is detected pursuant to §63.1363(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 §63.1363(b)(3)(i). [§63.1363(c)(3)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(c)(3)(ii)]

(A) Tightening of packing gland nuts. [§63.1363(c)(3)(ii)(A)]

(B) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1363(c)(3)(ii)(B)]

(4) Calculation of percent leakers. [§63.1363(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. [§63.1363(c)(4)(i)]

(ii) If, calculated on a 1–year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the permittee shall monitor each pump once per month, until the calculated 1–year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps). [§63.1363(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 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1363(c)(4)(iii)]

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart: [§63.1363(c)(4)(iv)]

$$\% \ P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)}\right] \times 100$$

Where: % P_L = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in §63.1363(c)(2)(i) and (ii)

P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1363(c)(5) and (6).

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in §63.1363(c)(5)(i) through (vii) is exempt from the requirements of §63.1363(c)(1) through (c)(4)(iii), except as specified in §63.1363(c)(5)(iv)(A) and (vii). [§63.1363(c)(5)]

(i) Each dual mechanical seal system is: [§63.1363(c)(5)(i)]

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1363(c)(5)(i)(A)]

(B) 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 §63.1363(b)(3)(ii); or [§63.1363(c)(5)(i)(B)]

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1363(c)(5)(i)(C)]

(ii) The barrier fluid is not in light liquid service. [§63.1363(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. [§63.1363(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 §63.1363(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1363(c)(5)(iv)]
(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(5)(iv)(A)]
(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(5)(iv)(B)]
(v) Each sensor as described in §63.1363(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. [§63.1363(c)(5)(v)]
(vi) Drips [§63.1363(c)(5)(vi)]
(A) 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. [§63.1363(c)(5)(vi)(A)]
(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1363(c)(5)(vi)(A), or if, based on the criteria established in §63.1363(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1363(c)(5)(vi)(B)]
(vii) When a leak is detected pursuant to §63.1363(c)(5)(iv)(A) or (vi)(B), the leak must be repaired as specified in §63.1363(c)(3). [§63.1363(c)(5)(vii)]
(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1363(c)(1) through (3). [§63.1363(c)(6)]
(7) 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 §63.1363(b)(3)(ii) is exempt from the requirements of §63.1363(c)(2) through (5). [§63.1363(c)(7)]
(8) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1363(c)(5) or (6), the group of processes is exempt from the requirements of §63.1363(c)(4). [§63.1363(c)(9)]

(d) Standards: open-ended valves or lines. [§63.1363(d)]

(1) Open ended valves or lines [§63.1363(d)(1)]
(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.1363(d)(4) through (6). [§63.1363(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 1 hour of cessation of operations requiring process fluid flow

through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. [§63.1363(d)(1)(ii)]

(2) 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. [§63.1363(d)(2)]

(3) 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 §63.1363(d)(1) at all other times. [§63.1363(d)(3)]

(4) 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 §63.1363(d)(1) through (3). [§63.1363(d)(4)]

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(5)]

(6) 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 §63.1363(d)(1) through (3) are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(6)]

(e) Standards: valves in gas/vapor service and in light liquid service. [§63.1363(e)]

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. [§63.1363(e)(1)]

(2) For existing affected sources, all valves subject to this section shall be monitored, except as provided in §63.1363(f) by no later than 1 year after December 23, 2003. [§63.1363(e)(2)]

(3) Monitoring. The permittee of a source subject to this section shall monitor all valves, except as provided in §63.1363(f), at the intervals specified in §63.1363(e)(4) and shall comply with all other provisions of this section, except as provided in §63.1363(b)(3)(i). [§63.1363(e)(3)]

(i) The valves shall be monitored to detect leaks by the method specified in §63.180(b) of subpart H of this part. [§63.1363(e)(3)(i)]

(ii) An instrument reading of 500 parts per million or greater defines a leak. [§63.1363(e)(3)(ii)]

(4) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1363(e)(2) the permittee shall monitor valves for leaks at the intervals specified below: [§63.1363(e)(4)]

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to §63.1363(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1363(e)(9). [§63.1363(e)(4)(i)]

(ii) For a group of processes with less than 2 percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1363(e)(4)(iii) through (v). [§63.1363(e)(4)(ii)]

(iii) For a group of processes with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters. [§63.1363(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 4 quarters. [§63.1363(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 2 years. [§63.1363(e)(4)(v)]

(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1363(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1363(e)(5)(i) through (viii) apply. [§63.1363(e)(5)]

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to §63.1363(e)(3)(i) and (ii) and as calculated according to §63.1363(e)(6)(ii) and (iii). [§63.1363(e)(5)(i)]

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1363(e)(5)(ii) (A) through (C). [§63.1363(e)(5)(ii)]

(A) The permittee shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained. [§63.1363(e)(5)(ii)(A)]

(B) 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 must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1363(e)(5)(ii)(B)]

(C) 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. [§63.1363(e)(5)(ii)(C)]

(iii) The permittee shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 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 2 percent leaking valves or greater, the permittee shall revert to the program required in §63.1363(e)(2) through (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 Equation 4 of this subpart: [§63.1363(e)(5)(iii)]

$$\%\ V_{LO} = \frac{\sum_{i=1}^{n}\left(\%\ V_{Li} \times V_i\right)}{\sum_{i=1}^{n} V_i}$$

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

$\%\ V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1363(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i

n = number of subgroups

(iv) Records. In addition to records required by §63.1363(g), the permittee shall maintain records specified in §63.1363(e)(5)(iv)(A) through (D). [§63.1363(e)(5)(iv)]

(A) Which valves are assigned to each subgroup, [§63.1363(e)(5)(iv)(A)]

(B) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1363(e)(5)(iv)(B)]

(C) Which valves are reassigned and when they were reassigned, and [§63.1363(e)(5)(iv)(C)]

(D) The results of the semiannual overall performance calculation required in §63.1363(e)(5)(iii). [§63.1363(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. [§63.1363(e)(5)(v)]

(vi) Semiannual reports. In addition to the information required by §63.1363(h)(3), the permittee shall submit in the Periodic reports the information specified in §63.1363(e)(5)(vi) (A) and (B). [§63.1363(e)(5)(vi)]

(A) Valve reassignments occurring during the reporting period, and [§63.1363(e)(5)(vi)(A)]

(B) Results of the semiannual overall performance calculation required by §63.1363(e)(5)(iii). [§63.1363(e)(5)(vi)(B)]

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1363(e)(6)(iii) shall be used. [§63.1363(e)(5)(vii)]

(viii) Except for the overall performance calculations required by §63.1363(e)(5)(i) and (iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section. [§63.1363(e)(5)(viii)]

(6) Percentage Calculations [§63.1363(e)(6)]

(i) The permittee shall decide no later than the implementation date of this subpart 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. [§63.1363(e)(6)(i)]

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: [§63.1363(e)(6)(ii)]

$$\% \ V_L = \left[\frac{V_L}{V_T}\right] \times 100$$

Where: % V_L = percent leaking valves

V_L = number of valves found leaking excluding nonrepairables as provided in §63.1363(e)(6)(iv)(A)

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1363(e)(7)(iii)

(iii) 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 2 years)

monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1363(e)(6)(iii)]

(iv) Nonrepairable valves [§63.1363(e)(6)(iv)]

(A) 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 §63.1363(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 1 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. [§63.1363(e)(6)(iv)(A)]

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1363(e)(6)(iv)(B)]

(7) Repair provisions. [§63.1363(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 §63.1363(b)(3)(i). [§63.1363(e)(7)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.1363(e)(7)(ii)]

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-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.” [§63.1363(e)(7)(iii)]

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking. [§63.1363(e)(7)(iii)(A)]

(B) Periodic monitoring required by §63.1363(e)(2) through (4) may be used to satisfy the requirements of §63.1363(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1363(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1363(e)(7)(iii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1363(e)(7)(iii). [§63.1363(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to §63.1363(e)(7)(iii), the permittee shall follow the provisions of §63.1363(e)(7)(iii)(C)(*1*) and (*2*) to determine whether that valve must be counted as a leaking valve for purposes of §63.1363(e)(6). [§63.1363(e)(7)(iii)(C)]

(*1*) If the permittee elects to use periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1363(e)(7)(iii)(C)(1)]

(2) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(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. [§63.1363(e)(7)(iii)(C)(2)]

(8) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(e)(8)]
- (i) Tightening of bonnet bolts, [§63.1363(e)(8)(i)]
- (ii) Replacement of bonnet bolts, [§63.1363(e)(8)(ii)]
- (iii) Tightening of packing gland nuts, and [§63.1363(e)(8)(iii)]
- (iv) Injection of lubricant into lubricated packing. [§63.1363(e)(8)(iv)]

(9) 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 §63.1363(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1363(e)(4)(iii), (iv), or (v), except as provided in §63.1363(f). [§63.1363(e)(9)]

(f) Unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [§63.1363(f)]

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in §63.1363(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1363(f)(2), (3), or (4), as applicable. All equipment, except connectors that meet the requirements in §63.1363(f)(4), must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1363(f)(1)]
- (i) For pumps and agitators, §63.1363(c)(2), (3), and (4) do not apply. [§63.1363(f)(1)(i)]
- (ii) For valves, §63.1363(e)(2) through (7) do not apply. [§63.1363(f)(1)(ii)]
- (iii) For connectors, §63.174(b) through (e) and §63.1363(b)(3)(iii)(C) through (G) do not apply. [§63.1363(f)(1)(iii)]
- (iv) For closed-vent systems, §63.172(f)(1), (f)(2), and (g) do not apply. [§63.1363(f)(1)(iv)]

(2) Equipment that is unsafe-to-monitor. [§63.1363(f)(2)]
- (i) Valves, connectors, agitators, and any part of closed-vent systems 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 identified in §63.1363(f)(1)(i) through (iii), or the inspection requirements identified in §63.1363(f)(1)(iv). [§63.1363(f)(2)(i)]
- (ii) The permittee of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed vent systems, inspections shall not be more frequent than annually. [§63.1363(f)(2)(ii)]

(3) Equipment that is difficult-to-monitor. [§63.1363(f)(3)]
- (i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the permittee determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service; [§63.1363(f)(3)(i)]
- (ii) The permittee of valves, agitators, or pumps designated as difficult-to-monitor must 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-monitor, the permittee must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [§63.1363(f)(3)(iii)]

(4) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1363(f)(4)]

(i) A connector may be designated as inaccessible if it is: [§63.1363(f)(4)(i)]

(A) Buried; [§63.1363(f)(4)(i)(A)]

(B) Insulated in a manner that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(B)]

(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(C)]

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or [§63.1363(f)(4)(i)(D)]

(E) 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. [§63.1363(f)(4)(i)(E)]

(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [§63.1363(f)(4)(i)(F)]

(ii) 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 §63.1363(b)(3)(i). [§63.1363(f)(4)(iii)]

(iii) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1363(g) and (h). [§63.1363(f)(4)(iv)]

Emission Limitation/Monitoring-Vapor Suppression Equipment [§63.1366(h)]:

(a) Leak inspection provisions for vapor suppression equipment. [§63.1366(h)]

(1) Except as provided in §63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the permittee shall comply with the requirements of §63.1366(h)(2) through (8). [§63.1366(h)(1)]

(2) Except as provided in §63.1366(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(i) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(iii). [§63.1366(h)(2)]

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1366(h)(2)(i)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(i)(A)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(i)(B)]

(ii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1366(h)(2)(iii)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(iii)(A)]

(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(iii)(B)]

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1366(h)(3)(i) through (vi). [§63.1366(h)(3)]

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, appendix A. [§63.1366(h)(3)(i)]

(ii) Detection instrument performance criteria. [§63.1366(h)(3)(ii)]

(A) Except as provided in §63.1366(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the 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. [§63.1366(h)(3)(ii)(A)]

(B) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1366(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 §63.1366(h)(3)(ii)(A). [§63.1366(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 40 CFR Part 60, appendix A. [§63.1366(h)(3)(iii)]

(iv) Calibration gases shall be as follows: [§63.1366(h)(3)(iv)]

(A) Zero air (less than 10 parts per million hydrocarbon in air); and [§63.1366(h)(3)(iv)(A)]

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. 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 §63.1366(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. [§63.1366(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. [§63.1366(h)(3)(v)]

(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance. [§63.1366(h)(3)(vi)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1366(h)(5). [§63.1366(h)(4)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.1366(h)(4)(i)]

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected. [§63.1366(h)(4)(ii)]

(5) 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 §63.1361, 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. [§63.1366(h)(5)]

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii) if: [§63.1366(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 §63.1366(h)(2)(i), (ii), or (iii); and [§63.1366(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. Inspection is not required more than once annually. [§63.1366(h)(6)(ii)]

(7) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii)(A) if: [§63.1366(h)(7)]

(i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [§63.1366(h)(7)(i)]

(ii) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. [§63.1366(h)(7)(ii)]

(8) Records shall be maintained as specified in §63.1367(f). [§63.1366(h)(8)]

(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of §63.1363, the permittee shall comply with the provisions of §63.1363 and is exempt from the requirements of this section. [§63.1366(h)(9)]

Test Methods:

(a) Each permittee subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [§63.180(a)]

(b) Monitoring, as required under this subpart, shall comply with the following requirements: [§63.180(b)]

(1) Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(1)]

(2) Detection instruments [§63.180(b)(2)]

(i) Except as provided for in §63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. [§63.180(b)(2)(i)]

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in §63.180(b)(2)(i), 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 §63.180(b)(2)(i). [§63.180(b)(2)(ii)]

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(3)]

(4) Calibration gases shall be: [§63.180(b)(4)]
(i) Zero air (less than 10 parts per million of hydrocarbon in air); and [§63.180(b)(4)(i)]
(ii) 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 §63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as specified in §63.180(b)(4)(iii) of subpart H. [§63.180(b)(4)(ii) and §63.1363(b)(3)(v)]
(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. [§63.180(b)(4)(iii)]
(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.180(b)(5)]
(6) Monitoring data that do not meet the criteria specified in §63.180(b)(1)through (b)(5) may be used to qualify for less frequent monitoring under the provisions in §63.1363(e) or §63.1363(b)(3)(iii)(C) through (G) provided the data meet the conditions specified in §63.180(b)(6)(ii). [§63.180(b)(6), §63.1363(b)(1)(v), and §63.1363(b)(3)(iii)(A)]
(i) The departures from the criteria specified in §63.180(b)(1) through (b)(5) or from the specified monitoring frequency of §63.1363(e) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of appendix A of 40 CFR Part 60 instead of §63.180(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure. [§63.180(b)(6)(ii) and §63.1363(b)(1)(v)]

(c) When equipment is monitored for compliance as required in §§63.164(i), and 63.165(a) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the permittee may elect to adjust or not to adjust the instrument readings for background. If a permittee elects to not adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(b)(1) through (b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If a permittee elects to adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(c)(1) through (c)(4). [§63.180(c)]
(1) The requirements of §63.180(b) (1) through (4) shall apply. [§63.180(c)(1)]
(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking. [§63.180(c)(2)]

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR Part 60, appendix A. [§63.180(c)(3)]

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance. [§63.180(c)(4)]

(d) Organic HAP service [§63.180(d)]

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used. [§63.180(d)(1)]

(2) Other methods [§63.180(d)(2)]

(i) A permittee may use good engineering judgment rather than the procedures in §63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When a permittee and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in §63.180(d)(1) shall be used to resolve the disagreement. [§63.180(d)(2)(i)]

(ii) Conversely, the permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. [§63.180(d)(2)(ii)]

(3) If a permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in §63.180(d)(1), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service. [§63.180(d)(3)]

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment. [§63.180(d)(4)]

(e) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart. [§63.180(f)]

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum. [§63.180(f)(1)]

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off. [§63.180(f)(2)]

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation: [§63.180(f)(3)]

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta \frac{P}{t}$ =Change in pressure, psig/hr.

P_f=Final pressure, psig.

P_i=Initial pressure, psig.

$t_f - t_i$ =Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the permittee shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour. [§63.180(f)(4)]

(5) An alternative procedure may be used for leak testing the equipment if the permittee demonstrates the alternative procedure is capable of detecting a pressure loss or rise. [§63.180(f)(5)]

(f) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart. [§63.180(g)]

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off. [§63.180(g)(1)]

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure. [§63.180(g)(2)]

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected. [§63.180(g)(3)]

(4) An alternative procedure may be used for leak testing the equipment, if the permittee demonstrates the alternative procedure is capable of detecting losses of fluid. [§63.180(g)(4)]

Recordkeeping:

(a) Recordkeeping requirements. [§63.1363(g)]

(1) The permittee of more than one group of processes subject to the provisions of this section 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. [§63.1363(g)(1)]

(2) General recordkeeping. Except as provided in §63.1363(g)(5), the following information pertaining to all equipment subject to the requirements in this section shall be recorded: [§63.1363(g)(2)]

(i) Information required [§63.1363(g)(2)(i)]

(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to §63.1363(f), need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group,

and the number of subject connectors 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 within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored. [§63.1363(g)(2)(i)(A)]

(B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of subpart H of this part and valves subject to the provisions of §63.1363(e)(4). [§63.1363(g)(2)(i)(B)]

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(2)(i)(C)]

(ii) Identification numbers [§63.1363(g)(2)(ii)]

(A) 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 §63.1363(c)(7) or §§63.164(h) or 63.165(c) of subpart H of this part. [§63.1363(g)(2)(ii)(A)]

(B) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.164(i) of subpart H of this part. [§63.1363(g)(2)(ii)(B)]

(iii)Identification numbers [§63.1363(g)(2)(iii)]

(A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of subpart H of this part. [§63.1363(g)(2)(iii)(A)]

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of subpart H of this part. [§63.1363(g)(2)(iii)(B)]

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified. [§63.1363(g)(2)(iv)]

(v) The following information shall be recorded for each dual mechanical seal system: [§63.1363(g)(2)(v)]

(A) Design criteria required by §63.1363(c)(5)(vi)(A) and §63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and [§63.1363(g)(2)(v)(A)]

(B) Any changes to these criteria and the reasons for the changes. [§63.1363(g)(2)(v)(B)]

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under §63.1363(f) and a copy of the plan for monitoring this equipment. [§63.1363(g)(2)(vi)]

(vii) A list of connectors removed from and added to the process, as described in §63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used. [§63.1363(g)(2)(vii)]

(viii)For batch processes that the permittee elects to monitor as provided under §63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the

completion of the each monitoring survey for the type of equipment monitored. [§63.1363(g)(2)(viii)]

(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1363(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 §63.1363(g)(4) for leaking equipment identified in this inspection, except as provided in §63.1363(g)(5). These records shall be retained for 5 years. [§63.1363(g)(3)]

(4) Monitoring records. When each leak is detected as specified in §63.1363(c) and (e) and §§63.164, 63.169, and 63.174 of subpart H of this part, the permittee shall record the information specified in §63.1363(g)(4)(i) through (viii). All records shall be retained for 5 years, in accordance with the requirements of §63.10(b)(1) of subpart A of this part. [§63.1363(g)(4)]

(i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1363(g)(4)(i)]

(ii) The date the leak was detected and the date of first attempt to repair the leak. [§63.1363(g)(4)(ii)]

(iii) The date of successful repair of the leak. [§63.1363(g)(4)(iii)]

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR Part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. [§63.1363(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. [§63.1363(g)(4)(v)]

(A) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.1367(a), for the source or may be part of a separate 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. [§63.1363(g)(4)(v)(A)]

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1363(g)(4)(v)(B)]

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1363(g)(4)(vi)]

(vii) Monitoring [§63.1363(g)(4)(vii)]

(A) If the alternative in §63.174(c)(1)(ii) of subpart H of this part 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) of subpart H of this part, as described in §63.174(c)(1) of subpart H of this part. [§63.1363(g)(4)(vii)(A)]

(B) The date and results of follow-up monitoring as required in §63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1363(g)(4)(vii)(B)]

(viii) The date and results of the monitoring required in §63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii)of subpart H of this part. 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. [§63.1363(g)(4)(viii)]

(ix) Copies of the periodic reports as specified in §63.1363(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1363(g)(4)(ix)]

(5) Records of pressure tests. The permittee who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of §63.1363(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1363(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. [§63.1363(g)(5)(i)]

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the permittee does not adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii) of subpart H of this part. [§63.1363(g)(5)(ii)]

(iii) 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 this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(5)(iii)]

(iv) The dates of each pressure test required in §63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. [§63.1363(g)(5)(iv)]

(v) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1363(g)(5)(v)]

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: [§63.1363(g)(5)(vi)]

(A) The date of each pressure test and the date of each leak repair attempt. [§63.1363(g)(5)(vi)(A)]

(B) Repair methods applied in each attempt to repair the leak. [§63.1363(g)(5)(vi)(B)]

(C) The reason for the delay of repair. [§63.1363(g)(5)(vi)(C)]

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1363(g)(5)(vi)(D)]

(E) The date of successful repair. [§63.1363(g)(5)(vi)(E)]

(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) of subpart H of this part 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) of subpart H of this part. The results shall include: [§63.1363(g)(6)]

(i) The background level measured during each compliance test. [§63.1363(g)(6)(i)]

(ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1363(g)(6)(ii)]

(7) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1363(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1363(b)(3)(ii). The records specified in §63.1363(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1363(g) (7)(ii) and (iii) shall be retained for 5 years. [§63.1363(g)(7)]

(i) The design specifications and performance demonstrations specified in §63.1363(g)(7)(i)(A) through (C). [§63.1363(g)(7)(i)]

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1363(g)(7)(i)(A)]
(B) The dates and descriptions of any changes in the design specifications. [§63.1363(g)(7)(i)(B)]
(C) A description of the parameter or parameters monitored, as required in §63.1363(b)(3)(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. [§63.1363(g)(7)(i)(D)]

(ii) Records of operation of closed-vent systems and control devices. [§63.1363(g)(7)(ii)]
(A) Dates and durations when the closed-vent systems and control devices required in §63.1363(c) and §§63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters. [§63.1363(g)(7)(ii)(A)]
(B) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1363(g)(7)(ii)(B)]
(C) Dates and durations of startups and shutdowns of control devices required in §63.1363(c) of this section and §§63.164 through 63.166 of subpart H of this part. [§63.1363(g)(7)(ii)(C)]

(iii) Records of inspections of closed-vent systems subject to the provisions of §63.172 of subpart H of this part. [§63.1363(g)(7)(iii)]
(A) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (2) of subpart H of this part 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. [§63.1363(g)(7)(iii)(A)]
(B) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in §63.1363(g)(4) shall be recorded. [§63.1363(g)(7)(iii)(B)]

(8) 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/vapor 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. [§63.1363(g)(8)]

(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section. [§63.1363(g)(9)]

(10) Records of Inspections. The permittee shall keep records specified in §63.1367(f)(1) through (6). [§63.1367(f)]
(i) 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 §63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(1)]
(ii) 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 §63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(2)]
(iii) 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 §63.1367(f)(3)(i) or (ii). [§63.1367(f)(3)]

(A) Hourly records of whether the flow indicator specified under §63.1362(j)(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. [§63.1367(f)(3)(i)]

(4) For each inspection conducted in accordance with §63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1367(f)(4)(i) through (ix). [§63.1367(f)(4)]

(i) Identification of the leaking equipment. [§63.1367(f)(4)(i)]

(ii) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1366(h)(3); or a record of that the leak was detected by sensory observations. [§63.1367(f)(4)(ii)]

(iii) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1367(f)(4)(iii)]

(iv) Maximum instrument reading measured by the method specified in §63.1366(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1367(f)(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. [§63.1367(f)(4)(v)]

(vi) The name, initials, or other form of identification of the permittee (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1367(f)(4)(vi)]

(vii) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1367(f)(4)(viii)]

(viii) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1367(f)(4)(viii)]

(ix) The date of successful repair of the leak. [§63.1367(f)(4)(ix)]

(5) For each inspection conducted in accordance with §63.1366(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. [§63.1367(f)(5)]

(6) For each visual inspection conducted in accordance with §63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1367(f)(6)]

Reporting:

(a) Reporting Requirements. [§63.1363(h)]

(1) The permittee of a source subject to this section shall submit the reports listed in §63.1363(h)(1)(i). [§63.1363(h)(1)]

(i) Periodic reports described in §63.1363(h)(3). [§63.1363(h)(1)(ii)]

(2) Periodic reports. The permittee of a source subject to this section shall submit Periodic reports. [§63.1363(h)(3)]

(i) A report containing the information in §63.1363(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of

Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [§63.1363(h)(3)(i)]

(ii) For equipment complying with the provisions of §63.1363(b) through (g), the Periodic report shall contain the summary information listed in §63.1363(h)(3)(ii)(A) through (L) for each monitoring period during the 6-month period. [§63.1363(h)(3)(ii)]

(A) The number of valves for which leaks were detected as described in §63.1363(e)(2), the percent leakers, and the total number of valves monitored; [§63.1363(h)(3)(ii)(A)]

(B) The number of valves for which leaks were not repaired as required in §63.1363(e)(7), identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(B)]

(C) The number of pumps and agitators for which leaks were detected as described in §63.1363(c)(2), the percent leakers, and the total number of pumps and agitators monitored; [§63.1363(h)(3)(ii)(C)]

(D) The number of pumps and agitators for which leaks were not repaired as required in §63.1363(c)(3); [§63.1363(h)(3)(ii)(D)]

(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part; [§63.1363(h)(3)(ii)(E)]

(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part; [§63.1363(h)(3)(ii)(F)]

(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; [§63.1363(h)(3)(ii)(G)]

(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(H)]

(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1363(h)(3)(ii)(I)]

(J) The results of all monitoring to show compliance with §§63.164(i) and 63.165(a) of subpart H of this part conducted within the semiannual reporting period. [§63.1363(h)(3)(ii)(J)]

(K) If applicable, the initiation of a monthly monitoring program under either §63.1363(c)(4)(ii) or §63.1363(e)(4)(i)(A). [§63.1363(h)(3)(ii)(K)]

(L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of subpart H of this part. [§63.1363(h)(3)(ii)(L)]

(iii) For permittees electing to meet the requirements of §63.178(b) of subpart H of this part, the Periodic report shall include the information listed in §63.1363(h)(3)(iii) (A) through (E) for each process. [§63.1363(h)(3)(iii)]

(A) Product process equipment train identification; [§63.1363(h)(3)(iii)(A)]

(B) The number of pressure tests conducted; [§63.1363(h)(3)(iii)(B)]

(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1363(h)(3)(iii)(C)]

(D) The facts that explain any delay of repairs; and [§63.1363(h)(3)(iii)(D)]

(E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of this part. [§63.1363(h)(3)(iii)(E)]

(iv) Any change in the information submitted under §63.1363(h)(2) shall be provided in the next Periodic report. [§63.1363(h)(3)(iv)]

PERMIT CONDITION (EU0051, EU0052 and EU0054 through EU0059)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Process vents subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall reduce the uncontrolled organic HAP emissions from a process vent by 98 percent by weight or greater. [§63.1362(b)(2)(ii)(A)]

(b) HCl and Cl_2 emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater. [§63.1362(b)(3)(ii)]

(c) Exemption for RCRA treatment units. The permittee shall be exempt from the initial compliance demonstrations and monitoring provisions in §§63.1365 and 63.1366 and the associated recordkeeping and reporting requirements in §§63.1367 and 63.1368 for emissions from process vents that are discharged to the following devices: [§63.1362(l)]

(1) 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. [§63.1362(l)(2)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

IMI-1 Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0060	IMI-1 1	Toluene Storage Tank (process #110-005); 12,700 gallon capacity; Installed 1986	None
EU0060a	IMI-1 2	MIBK Storage Tank (process #110-025); 8,000 gallon capacity; Installed 1986	None
EU0061	IMI-1 6A/B	Aminonitrile Storage Tank (process# 110-008); 30,000 gallon capacity; installed 1986	Acid Scrubber (process #633-214), followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0062	IMI-1 6A/B	Process Section 120	
EU0063	IMI-1 6A/B	Process Section 130	
EU0064	IMI-1 6A/B	Process Section 140/150	
EU0065	IMI-1 6A/B	Process Section 160	
EU0066	IMI-1 6A/B	Process Section 170	
EU0067	IMI-1 6A/B	Solvent Recovery Section 180	
EU0068	IMI-1 6A/B	Formulation Vessel (process #200-001)	
EU0069	IMI-1 6A/B	Formulation Vessel (process #200-037)	
EU0070	IMI-1 6A/B	Aqueous Waste Hold Tank (process #633-205)	
EU0071	IMI-1 6A/B	Organic Waste Hold Tank (process #633-207)	
EU0072	IMI-1 6B	IMI1 Facility Fumes bypass for HazWaste incineraters from Caustic Scrubber (631-205)	None
EU0073	IMI-1 11	Multipurpose Tank (process #110-034); 7,800 gallon capacity; Installed 1986	None
EU0074	IMI-1 13	Aqueous Premix Tank (process #200-034) 25,000 gallon capacity; installed 1986	None
EU0075	IMI-1 14	Final Product Storage Tank (process #200-011); 25,000 gallon capacity;installed 1986	None
EU0076	IMI-1 15	Drain Tank (process #633-203); 518 gallon capacity	None
EU0077	IMI-1 16	Drain Hold Tank (process #633-225); 8,000 gallon capacity	None
EU0078	IMI-1 17	Building Vent (fugitives)	None
EU0079	IMI-1 18 and IMI-1 6A/B	Solvent Storage Tank (process #110-031); 8,000 gallon capacity; Installed 1986;	Acid Scrubber (process #633-214), followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0080	IMI-1 19	Multipurpose Tank (process #110-014X) 7,000 gallon capacity Installed 1986	None
EU0081	IMI-1 5	Diacid Hopper (process #120-017)	Baghouse (process #631-018) followed by HEPA filter (process #631-024X)
EU0082	IMI-1 7	Process Section 190	Baghouse (process #631-025), followed by Direct Contact Condenser (process #190-005)
EU0083	IMI-1 9	Packaging Operations Section 190	Baghouse (process #190-019X) followed by HEPA filter (process #190-003X)
EU0084	IMI-1 10	Supersack Charging	Baghouse (process #631-310), followed by HEPA filter (process #631-312)
EU0085	IMI-1 10	Solids Charging Conveyor (process #200-054)	Baghouse (process #631-310), followed by HEPA filter (process #631-312)
EU0086	IMI-1 12	Urea Charging Hopper (process #200-006)	Bag Filter (process #631-022)

PERMIT CONDITION (EU0060 through EU0080)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM. The individual requirements for each type of equipment are detailed in following Permit Conditions.

General Conditions

Emission Limitations/Operating Limitations

(a) On and after December 23, 2003, the permittee of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in §63.1363, as summarized in Table 2 to Subpart MMM of Part 63. [§63.1362(a)]

(b) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions regarding construction and reconstruction in §63.5 of subpart A of this part. [§63.1367(a)(5)]

(c) Opening of a safety device. Opening of a safety device, as defined in §63.1361, is allowed at any time conditions require it to avoid unsafe conditions. [§63.1362(i)]

(d) Closed-vent systems. The permittee of a 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 §63.1362(b) through (d) shall comply with the requirements of Table 3 of this subpart and paragraph §63.1362(j)(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. [§63.1362(j)]

  (1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in §63.1367(f)(1). 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 [§63.1362(j)(1)]

  (2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in §63.1367(f)(2). [§63.1362(j)(2)]

Recordkeeping:

The permittee shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in §63.1367(a)(1) through (5). [§63.1367(a)]

(a) The permittee of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part. [§63.1367(a)(1)]

Reporting:

(a) The permittee shall comply with the reporting requirements of §63.1368(b) through (l). The permittee shall also comply with applicable paragraphs of §§63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart. [§63.1368(a)]

(b) The permittee who is subject to §63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to these standards. The application shall be prepared in accordance with §63.5(d) of subpart A of this part. [§63.1368(c)]

Startup, Shutdown, Malfunction:
SSM Plan:
The permittee shall develop a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The permittee of an affected source shall keep the current and superseded versions of this plan onsite, as specified in §63.6(e)(3)(v) of subpart A of this part. The permittee shall keep the startup, shutdown, and malfunction records specified in paragraphs §63.1367(a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in §63.1368(i). [§63.1367(a)(3)]

(i) The permittee shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with subpart MMM of this part, as specified in §63.6(e)(3)(iii). [§63.1367(a)(3)(i)]
(ii) The permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subpart MMM of this part. [§63.1367(a)(3)(ii)]
(iii) For each startup, shutdown, or malfunction, the permittee shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in §63.6(e)(3)(iii) of subpart A of this part; alternatively, the permittee shall record any actions taken that are not consistent with the plan, as specified in §63.6(e)(3)(iv) of subpart A of this part. [§63.1367(a)(3)(iii)]

Reporting:
For the purposes of subpart MMM of this part, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under §63.1368(g) instead of the schedule specified in §63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in §63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the permittee or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time the permittee takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee shall submit an immediate startup, shutdown, and malfunction report as specified in §63.10(d)(5)(ii) of subpart A of this part. [§63.1368(i)]

PERMIT CONDITION (EU0060 through EU0080)-002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM.
Standards for Equipment Leaks:
Emission Limitation/Monitoring-General Equipment Leaks:
(a) General equipment leak requirements. [§63.1363(a)]
(1) The provisions of this section apply to “equipment” as defined in §63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section. [§63.1363(a)(1)]

(2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: [§63.1363(a)(2)]
   (i) 40 CFR Part 60. [§63.1363(a)(2)(i)]
   (ii) 40 CFR Part 61. [§63.1363(a)(2)(ii)]

(3) The provisions in §63.1(a)(3) of subpart A of this part do not alter the provisions in §63.1363(a)(2). [§63.1363(a)(4)]

(4) Lines and equipment not containing process fluids are not subject to the provisions of §63.1363. 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. [§63.1363(a)(5)]

(5) The provisions of §63.1363 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 this subpart MMM. [§63.1363(a)(6)]

(6) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. 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 15 calendar days of the end of each monitoring period for that component. [§63.1363(a)(7)]

(7) Equipment that is in vacuum service is excluded from the requirements of this section. [§63.1363(a)(8)]

(8) 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 this section if it is identified as required in §63.1363(g)(9). [§63.1363(a)(9)]

(9) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c) of subpart H of this part, the following requirements apply: [§63.1363(a)(10)]
   (i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1363(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 §63.1363(e)(7)(iii), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply with §63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring. [§63.1363(a)(10)(ii)]
   (iii) The identification on equipment, except as specified in §63.1363(a)(10)(ii), may be removed after it has been repaired. [§63.1363(a)(10)(iii)]

(b) The permittee shall comply with the provisions of subpart H of this part as presented below. When the term “process unit” is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes. [§63.1363(b)]

Standards: Compressors.

(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 §63.1363(a) of this subpart 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)]
   (i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]
   (ii) 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 §63.1362; or [§63.164(b)(2)]
   (iii) 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)]
(5) Seal systems [§63.164(e)]
   (i) 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)]
   (ii) 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)]
(6) 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)]
(7) Leak repair [§63.164(g)]
   (i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.164(g)(1)]
   (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.164(g)(2)]
(8) 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 §63.1362 of this subpart. [§63.164(h)]
(9) Any compressor that is designated, as described in §63.1363(g), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i) and §63.1363(b)(1)(vii)]
   (i) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and [§63.164(i)(1)]
   (ii) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Administrator. [§63.164(i)(2)]

Standards: 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 parts per million above background except as provided in §63.165(b), as measured by the method specified in §63.180(c) of this subpart. [§63.165(a)]
(2) Pressure releases [§63.165(b)]
   (i) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each

pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(b)(1)]

(ii) No later than 5 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 parts per million above background, as measured by the method specified in §63.180(c) of this subpart. [§63.165(b)(2)]

(3) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.1362 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]

(4) Rupture disks [§63.165(d)]

(i) 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)]

(ii) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(d)(2)]

Standards: 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 §63.1363(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a) and §63.1363(b)(1)(i)]

(2) Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]

(i) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]

(ii) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]

(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.1362; or [§63.166(b)(3)]

(iv) 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)]

(A) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]

(C) 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: 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 5 calendar days by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), 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), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.169(a)]

(2) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]

(3) Leaks [§63.169(c)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.169(c)(1)]

(ii) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.169(c)(2)]

(iii) 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)]

(4) First attempts at repair include, but are not limited to, the practices described under §§63.1363(c) and 63.1363(e) of this subpart, for pumps and valves, respectively. [§63.169(d), §63.1363(b)(1)(iii), and §63.1363(b)(1)(v)]

Standards: Delay of repair.

(1) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist: [§63.1363(b)(3)(i)]

(i) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1363(b)(3)(i)(A)]

(ii) 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. [§63.1363(b)(3)(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)]

(i) 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)]

(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.1362. [§63.171(c)(2)]

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [§63.171(e)]

Standards: Closed-vent systems and control devices.

(1) Permittees of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]

(2) 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)]

(i) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]

(ii) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172 (f)(2)(i)]

(B) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]

(3) Each closed-vent system shall be inspected according to the procedures in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.172(g)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i) of this section. [§63.172(h)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.172(h)(1)]

(ii) 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)]

(5) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the 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 process unit shutdown. [§63.172(i)]

(6) 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)]

(i) 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) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]

(ii) 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)]

(iii) 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)]

(7) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. [§63.172(m)]

(8) After the compliance dates specified in §63.100 of subpart F of this part, the permittee of any control device subject to this subpart 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 this subpart, 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 this subpart. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1363(h). [§63.172(n)]

Standards: Connectors in gas/vapor service and in light liquid service.

(1) The permittee of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1363(a) and §63.1363(f) of this subpart , at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(a) and §63.1363(b)(1)(i)]

(i) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v). [§63.174(a)(1)]

(ii) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. [§63.174(a)(2)]

(2) The permittee shall monitor for leaks at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(b) and §63.1363(b)(3)(iii)(A)]

(i) 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. [§63.1363(b)(3)(iii)(C)]

(ii) 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 last required monitoring period, monitoring shall be performed once every 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period. [§63.1363(b)(3)(iii)(D)]

(iii) The permittee shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in §63.1363(b)(3)(iii)(D), the first 4 years specified in §63.1363(b)(3)(iii)(G), or the

entire 8 years specified in §63.1363(b)(3)(iii)(G). At the end of that 2-year monitoring period, the permittee shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the permittee may again elect to monitor in accordance with §63.1363(b)(3)(iii)(D) or (G), as applicable. [§63.1363(b)(3)(iii)(E)]

(iv) If the permittee complying with the requirements of §63.1363(b)(3)(iii)(D) or (G) for a group of processes determines that 1 percent or greater of the connectors are leaking, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of §63.1363(b)(3)(iii)(D) or (G) after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking. [§63.1363(b)(3)(iii)(F)]

(v) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 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 §63.1363(b)(3)(iii)(D), (E), or (F). [§63.1363(b)(3)(iii)(G)]

(3) Connectors

(i) Open connectors

(A) 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 3 months after being returned to organic hazardous air pollutants 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)]

(B) As an alternative to the requirements in §63.174(c)(1)(i), a 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 §63.1363(b)(3)(iii)(C) through (G), 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)]

(C) A permittee may switch alternatives described in §63.174(c)(1) (i) and (ii) at the end of the current monitoring period he is in, provided that it is reported as required in §63.1363(h) of this subpart 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) and §63.1363(b)(1)(viii)]

(ii) As an alternative to the requirements of §63.1363(b)(3)(iii)(C) through (G), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in §63.174(c)(2)(iv) may: [§63.174(c)(2)]

(A) Comply with the requirements of §63.169 of this subpart, and [§63.174(c)(2)(i)]

(B) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the

seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d). [§63.174(c)(2)(ii)]

(C) The provisions of §63.174(c)(2) apply to screwed connectors installed before November 10, 1997. [§63.174(c)(2)(iv)]

(4) 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 §63.1363(f) and in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [§63.174(d)]

(5) For use in determining the monitoring frequency, as specified in §63.1363(b)(3)(iii)(C) through (G), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]

(i) For the first monitoring period, use the following equation: [§63.174(i)(1)]

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

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

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

C_C = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(ii) For subsequent monitoring periods, use the following equation: [§63.174(i)(2)]

$$\%C_L = \left[\frac{(C_L - C_{AN})}{(C_t + C_c)}\right] \times 100$$

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1363(b)(3)(iii)(C) through (G) and §63.174 (c), not to exceed 2 percent of the total connector population, C_t.

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

C_C = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable

subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(6) Optional credit for removed connectors. If a permittee eliminates a connector subject to monitoring under §63.1363(b)(3)(iii)(C) through (G), 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). [§63.174(j)]
   (i) The connector was welded after November 10, 1997. [§63.174(j)(1)]
   (ii) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]
   (iii) Welds created after November 10, 1997 but before June 23, 1999 are monitored or tested by 3 months after December 23, 2003. [§63.174(j)(3)]
   (iv) Welds created after June 23, 1999 are monitored or tested within 3 months after being welded. [§63.174(j)(4)]
   (v) 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 this subpart. [§63.174(j)(5)]

Alternative means of emission limitation: Batch processes.

(1) As an alternative to complying with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b), § 63.171, and §63.174, the permittee of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in §63.178(b) and (c), with the differences specified in §63.1363(b)(3)(iv), or the permittee may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The permittee may switch among the alternatives provided the change is documented as specified in §63.1363(g). [§63.178(a)]

(2) The following requirements shall be met if a permittee elects to use pressure testing of process equipment to demonstrate compliance with this subpart. A permittee who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.1363(c), §63.1363(e), and §63.169 of this subpart. [§63.178(b)]
   (i) Each time equipment is reconfigured for production of a different product or intermediate, the process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service. [§63.178(b)(1)]
      (A) When the process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment. [§63.178(b)(1)(i)]
      (B) Each process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year. [§63.178(b)(1)(ii)]
      (C) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate. [§63.178(b)(1)(iii)]
   (ii) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart. [§63.178(b)(2)]
   (iii) Pressure tests

(A) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss. [§63.178(b)(3)(i)]

(B) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss. [§63.178(b)(3)(ii)]

(iv) Leaks

(A) If a leak is detected, it shall be repaired and the process equipment shall be retested before start-up of the process. [§63.178(b)(4)(i)]

(B) If a process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in §63.178(d) are met. [§63.178(b)(4)(ii)]

(3) The following requirements shall be met if a permittee elects to monitor the equipment to detect leaks by the method specified in §63.180(b), with the differences specified in §63.180(b)(3)(v), of this subpart to demonstrate compliance with this subpart. [§63.178(c)]

(i) The permittee shall comply with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b),, and §§63.172 through 63.174 of this subpart. [§63.178(c)(1)]

(ii) The equipment shall be monitored for leaks by the method specified in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.178(c)(2)]

(iii) The equipment shall be monitored for leaks as specified below: [§63.178(c)(3)]

(A) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit. [§63.178(c)(3)(i)]

(B) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart. [§63.178(c)(3)(ii)]

(C) Equipment other than connectors shall be monitored quarterly. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating. [§63.178(c)(3)(iii) and §63.1363(b)(3)(iv)(B)]

(D) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. A permittee may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating. [§63.178(c)(3)(iv)]

(iv) If 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 §63.178(d). [§63.178(c)(4)]

(4) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met: [§63.178(d)]

(i) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted. [§63.178(d)(1)]
(ii) The repair is made no later than 10 calendar days after delivery of the replacement equipment. [§63.178(d)(2)]

(c) Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1363(c)]

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service. [§63.1363(c)(1)]
(2) Monitoring [§63.1363(c)(2)]
(i) Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in §63.180(b), except as provided in §63.1363(f), and §63.1363(c)(5) through (9). [§63.1363(c)(2)(i)]
(ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b) of subpart H of this part, that defines a leak is: [§63.1363(c)(2)(ii)]
(A) For agitators, an instrument reading of 10,000 parts per million or greater. [§63.1363(c)(2)(ii)(A)]
(B) For pumps, an instrument reading of 2,000 parts per million or greater. [§63.1363(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 seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1363(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1363(c)(2)(iii)]
(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(2)(iii)(A)]
(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(2)(iii)(B)]
(3) Repair provisions. [§63.1363(c)(3)]
(i) When a leak is detected pursuant to §63.1363(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 §63.1363(b)(3)(i). [§63.1363(c)(3)(i)]
(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(c)(3)(ii)]
(A) Tightening of packing gland nuts. [§63.1363(c)(3)(ii)(A)]
(B) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1363(c)(3)(ii)(B)]
(4) Calculation of percent leakers. [§63.1363(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. [§63.1363(c)(4)(i)]
(ii) If, calculated on a 1–year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the permittee shall monitor each pump once per month, until the calculated 1–year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps). [§63.1363(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 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1363(c)(4)(iii)]

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart: [§63.1363(c)(4)(iv)]

$$\% \ P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)} \right] \times 100$$

Where: $\% P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in §63.1363(c)(2)(i) and (ii)

P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1363(c)(5) and (6).

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in §63.1363(c)(5)(i) through (vii) is exempt from the requirements of §63.1363(c)(1) through (c)(4)(iii), except as specified in §63.1363(c)(5)(iv)(A) and (vii). [§63.1363(c)(5)]

(i) Each dual mechanical seal system is: [§63.1363(c)(5)(i)]

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1363(c)(5)(i)(A)]

(B) 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 §63.1363(b)(3)(ii); or [§63.1363(c)(5)(i)(B)]

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1363(c)(5)(i)(C)]

(ii) The barrier fluid is not in light liquid service. [§63.1363(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. [§63.1363(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 §63.1363(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1363(c)(5)(iv)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(5)(iv)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(5)(iv)(B)]

(v) Each sensor as described in §63.1363(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. [§63.1363(c)(5)(v)]

(vi) Drips [§63.1363(c)(5)(vi)]

(A) 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. [§63.1363(c)(5)(vi)(A)]

(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1363(c)(5)(vi)(A), or if, based on the criteria established in §63.1363(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1363(c)(5)(vi)(B)]

(vii) When a leak is detected pursuant to §63.1363(c)(5)(iv)(A) or (vi)(B), the leak must be repaired as specified in §63.1363(c)(3). [§63.1363(c)(5)(vii)]

(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1363(c)(1) through (3). [§63.1363(c)(6)]

(7) 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 §63.1363(b)(3)(ii) is exempt from the requirements of §63.1363(c)(2) through (5). [§63.1363(c)(7)]

(8) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1363(c)(5) or (6), the group of processes is exempt from the requirements of §63.1363(c)(4). [§63.1363(c)(9)]

(d) Standards: open-ended valves or lines. [§63.1363(d)]

(1) Open ended valves or lines [§63.1363(d)(1)]

(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.1363(d)(4) through (6). [§63.1363(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 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. [§63.1363(d)(1)(ii)]

(2) 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. [§63.1363(d)(2)]

(3) 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 §63.1363(d)(1) at all other times. [§63.1363(d)(3)]

(4) 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 §63.1363(d)(1) through (3). [§63.1363(d)(4)]

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(5)]

(6) 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 §63.1363(d)(1) through (3) are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(6)]

(e) Standards: valves in gas/vapor service and in light liquid service. [§63.1363(e)]

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. [§63.1363(e)(1)]

(2) For existing affected sources, all valves subject to this section shall be monitored, except as provided in §63.1363(f) by no later than 1 year after December 23, 2003. [§63.1363(e)(2)]

(3) Monitoring. The permittee of a source subject to this section shall monitor all valves, except as provided in §63.1363(f), at the intervals specified in §63.1363(e)(4) and shall comply with all other provisions of this section, except as provided in §63.1363(b)(3)(i). [§63.1363(e)(3)]

(i) The valves shall be monitored to detect leaks by the method specified in §63.180(b) of subpart H of this part. [§63.1363(e)(3)(i)]

(ii) An instrument reading of 500 parts per million or greater defines a leak. [§63.1363(e)(3)(ii)]

(4) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1363(e)(2) the permittee shall monitor valves for leaks at the intervals specified below: [§63.1363(e)(4)]

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to §63.1363(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1363(e)(9). [§63.1363(e)(4)(i)]

(ii) For a group of processes with less than 2 percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1363(e)(4)(iii) through (v). [§63.1363(e)(4)(ii)]

(iii) For a group of processes with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters. [§63.1363(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 4 quarters. [§63.1363(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 2 years. [§63.1363(e)(4)(v)]

(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1363(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1363(e)(5)(i) through (viii) apply. [§63.1363(e)(5)]

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to §63.1363(e)(3)(i) and (ii) and as calculated according to §63.1363(e)(6)(ii) and (iii). [§63.1363(e)(5)(i)]

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1363(e)(5)(ii) (A) through (C). [§63.1363(e)(5)(ii)]

(A) The permittee shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained. [§63.1363(e)(5)(ii)(A)]

(B) 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 must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1363(e)(5)(ii)(B)]

(C) 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. [§63.1363(e)(5)(ii)(C)]

(iii) The permittee shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 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 2 percent leaking valves or greater, the permittee shall revert to the program required in §63.1363(e)(2) through (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 Equation 4 of this subpart: [§63.1363(e)(5)(iii)]

$$\% \ V_{LO} = \frac{\sum_{i=1}^{n} \left(\% \ V_{Li} \times V_i \right)}{\sum_{i=1}^{n} V_i}$$

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

$\% \ V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1363(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i

n = number of subgroups

(iv) Records. In addition to records required by §63.1363(g), the permittee shall maintain records specified in §63.1363(e)(5)(iv)(A) through (D). [§63.1363(e)(5)(iv)]

(A) Which valves are assigned to each subgroup, [§63.1363(e)(5)(iv)(A)]

(B) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1363(e)(5)(iv)(B)]

(C) Which valves are reassigned and when they were reassigned, and [§63.1363(e)(5)(iv)(C)]

(D) The results of the semiannual overall performance calculation required in §63.1363(e)(5)(iii). [§63.1363(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. [§63.1363(e)(5)(v)]

(vi) Semiannual reports. In addition to the information required by §63.1363(h)(3), the permittee shall submit in the Periodic reports the information specified in §63.1363(e)(5)(vi) (A) and (B). [§63.1363(e)(5)(vi)]

(A) Valve reassignments occurring during the reporting period, and [§63.1363(e)(5)(vi)(A)]

(B) Results of the semiannual overall performance calculation required by §63.1363(e)(5)(iii). [§63.1363(e)(5)(vi)(B)]

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1363(e)(6)(iii) shall be used. [§63.1363(e)(5)(vii)]

(viii) Except for the overall performance calculations required by §63.1363(e)(5)(i) and (iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section. [§63.1363(e)(5)(viii)]

(6) Percentage Calculations [§63.1363(e)(6)]

(i) The permittee shall decide no later than the implementation date of this subpart 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. [§63.1363(e)(6)(i)]

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: [§63.1363(e)(6)(ii)]

$$\% \ V_L = \left[\frac{V_L}{V_T}\right] \times 100$$

Where: % V_L = percent leaking valves

V_L = number of valves found leaking excluding nonrepairables as provided in §63.1363(e)(6)(iv)(A)

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1363(e)(7)(iii)

(iii) 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 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1363(e)(6)(iii)]

(iv) Nonrepairable valves [§63.1363(e)(6)(iv)]

(A) 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 §63.1363(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 1 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. [§63.1363(e)(6)(iv)(A)]

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1363(e)(6)(iv)(B)]

(7) Repair provisions. [§63.1363(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 §63.1363(b)(3)(i). [§63.1363(e)(7)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.1363(e)(7)(ii)]

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-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.” [§63.1363(e)(7)(iii)]

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking. [§63.1363(e)(7)(iii)(A)]

(B) Periodic monitoring required by §63.1363(e)(2) through (4) may be used to satisfy the requirements of §63.1363(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1363(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1363(e)(7)(iii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1363(e)(7)(iii). [§63.1363(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to §63.1363(e)(7)(iii), the permittee shall follow the provisions of §63.1363(e)(7)(iii)(C)(*1*) and (*2*) to determine whether that valve must be counted as a leaking valve for purposes of §63.1363(e)(6). [§63.1363(e)(7)(iii)(C)]

(*1*) If the permittee elects to use periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1363(e)(7)(iii)(C)(1)]

(*2*) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(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. [§63.1363(e)(7)(iii)(C)(2)]

(8) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(e)(8)]

(i) Tightening of bonnet bolts, [§63.1363(e)(8)(i)]

(ii) Replacement of bonnet bolts, [§63.1363(e)(8)(ii)]

(iii) Tightening of packing gland nuts, and [§63.1363(e)(8)(iii)]

(iv) Injection of lubricant into lubricated packing. [§63.1363(e)(8)(iv)]

(9) 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 §63.1363(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1363(e)(4)(iii), (iv), or (v), except as provided in §63.1363(f). [§63.1363(e)(9)]

(f) Unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [§63.1363(f)]

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in §63.1363(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1363(f)(2), (3), or (4), as applicable. All equipment, except connectors that meet the requirements in §63.1363(f)(4), must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1363(f)(1)]

(i) For pumps and agitators, §63.1363(c)(2), (3), and (4) do not apply. [§63.1363(f)(1)(i)]

(ii) For valves, §63.1363(e)(2) through (7) do not apply. [§63.1363(f)(1)(ii)]

(iii) For connectors, §63.174(b) through (e) and §63.1363(b)(3)(iii)(C) through (G) do not apply. [§63.1363(f)(1)(iii)]

(iv) For closed-vent systems, §63.172(f)(1), (f)(2), and (g) do not apply. [§63.1363(f)(1)(iv)]

(2) Equipment that is unsafe-to-monitor. [§63.1363(f)(2)]

(i) Valves, connectors, agitators, and any part of closed-vent systems 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 identified in §63.1363(f)(1)(i) through (iii), or the inspection requirements identified in §63.1363(f)(1)(iv). [§63.1363(f)(2)(i)]

(ii) The permittee of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed vent systems, inspections shall not be more frequent than annually. [§63.1363(f)(2)(ii)]

(3) Equipment that is difficult-to-monitor. [§63.1363(f)(3)]

(i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the permittee determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service; [§63.1363(f)(3)(i)]

(ii) The permittee of valves, agitators, or pumps designated as difficult-to-monitor must 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-monitor, the permittee must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [§63.1363(f)(3)(iii)]

(4) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1363(f)(4)]

(i) A connector may be designated as inaccessible if it is: [§63.1363(f)(4)(i)]

(A) Buried; [§63.1363(f)(4)(i)(A)]

(B) Insulated in a manner that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(B)]

(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(C)]

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or [§63.1363(f)(4)(i)(D)]

(E) 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. [§63.1363(f)(4)(i)(E)]

(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [§63.1363(f)(4)(i)(F)]

(ii) 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 §63.1363(b)(3)(i). [§63.1363(f)(4)(iii)]

(iii) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1363(g) and (h). [§63.1363(f)(4)(iv)]

<u>Emission Limitation/Monitoring-Vapor Suppression Equipment [§63.1366(h)]:</u>

(a) Leak inspection provisions for vapor suppression equipment. [§63.1366(h)]

(1) Except as provided in §63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the permittee shall comply with the requirements of §63.1366(h)(2) through (8). [§63.1366(h)(1)]

(2) Except as provided in §63.1366(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(i) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(iii). [§63.1366(h)(2)]

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1366(h)(2)(i)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(i)(A)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(i)(B)]

(ii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1366(h)(2)(iii)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(iii)(A)]

(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(iii)(B)]

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1366(h)(3)(i) through (vi). [§63.1366(h)(3)]

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, appendix A. [§63.1366(h)(3)(i)]

(ii) Detection instrument performance criteria. [§63.1366(h)(3)(ii)]

(A) Except as provided in §63.1366(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the 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. [§63.1366(h)(3)(ii)(A)]

(B) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1366(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 §63.1366(h)(3)(ii)(A). [§63.1366(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 40 CFR Part 60, appendix A. [§63.1366(h)(3)(iii)]

(iv) Calibration gases shall be as follows: [§63.1366(h)(3)(iv)]

(A) Zero air (less than 10 parts per million hydrocarbon in air); and [§63.1366(h)(3)(iv)(A)]

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. 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 §63.1366(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. [§63.1366(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. [§63.1366(h)(3)(v)]

(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance. [§63.1366(h)(3)(vi)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1366(h)(5). [§63.1366(h)(4)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.1366(h)(4)(i)]

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected. [§63.1366(h)(4)(ii)]

(5) 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 §63.1361, 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. [§63.1366(h)(5)]

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii) if: [§63.1366(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 §63.1366(h)(2)(i), (ii), or (iii); and [§63.1366(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. Inspection is not required more than once annually. [§63.1366(h)(6)(ii)]

(7) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii)(A) if: [§63.1366(h)(7)]

(i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [§63.1366(h)(7)(i)]

(ii) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. [§63.1366(h)(7)(ii)]

(8) Records shall be maintained as specified in §63.1367(f). [§63.1366(h)(8)]

(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of §63.1363, the permittee shall comply with the provisions of §63.1363 and is exempt from the requirements of this section. [§63.1366(h)(9)]

Test Methods:

(a) Each permittee subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [§63.180(a)]

(b) Monitoring, as required under this subpart, shall comply with the following requirements: [§63.180(b)]

(1) Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(1)]

(2) Detection instruments [§63.180(b)(2)]

(i) Except as provided for in §63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. [§63.180(b)(2)(i)]

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in §63.180(b)(2)(i), 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 §63.180(b)(2)(i). [§63.180(b)(2)(ii)]

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(3)]

(4) Calibration gases shall be: [§63.180(b)(4)]

(i) Zero air (less than 10 parts per million of hydrocarbon in air); and [§63.180(b)(4)(i)]

(ii) 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 §63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as specified in §63.180(b)(4)(iii) of subpart H. [§63.180(b)(4)(ii) and §63.1363(b)(3)(v)]

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. [§63.180(b)(4)(iii)]

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.180(b)(5)]

(6) Monitoring data that do not meet the criteria specified in §63.180(b)(1)through (b)(5) may be used to qualify for less frequent monitoring under the provisions in §63.1363(e) or §63.1363(b)(3)(iii)(C) through (G) provided the data meet the conditions specified in §63.180(b)(6)(ii). [§63.180(b)(6), §63.1363(b)(1)(v), and §63.1363(b)(3)(iii)(A)]

(i) The departures from the criteria specified in §63.180(b)(1) through (b)(5) or from the specified monitoring frequency of §63.1363(e) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of appendix A of 40 CFR Part 60 instead of §63.180(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure. [§63.180(b)(6)(ii) and §63.1363(b)(1)(v)]

(c) When equipment is monitored for compliance as required in §§63.164(i), and 63.165(a) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the permittee may elect to adjust or not to adjust the instrument readings for background. If a permittee elects to not adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(b)(1) through (b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If a permittee elects to adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(c)(1) through (c)(4). [§63.180(c)]

(1) The requirements of §63.180(b) (1) through (4) shall apply. [§63.180(c)(1)]

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking. [§63.180(c)(2)]

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR Part 60, appendix A. [§63.180(c)(3)]

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance. [§63.180(c)(4)]

(d) Organic HAP service [§63.180(d)]

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used. [§63.180(d)(1)]

(2) Other methods [§63.180(d)(2)]

(i) A permittee may use good engineering judgment rather than the procedures in §63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When a permittee and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in §63.180(d)(1) shall be used to resolve the disagreement. [§63.180(d)(2)(i)]

(ii) Conversely, the permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. [§63.180(d)(2)(ii)]

(3) If a permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in §63.180(d)(1), or by

documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service. [§63.180(d)(3)]

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment. [§63.180(d)(4)]

(e) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart. [§63.180(f)]

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum. [§63.180(f)(1)]

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off. [§63.180(f)(2)]

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation: [§63.180(f)(3)]

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta\frac{P}{t}$ =Change in pressure, psig/hr.

P_f=Final pressure, psig.

P_i=Initial pressure, psig.

$t_f - t_i$ =Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the permittee shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour. [§63.180(f)(4)]

(5) An alternative procedure may be used for leak testing the equipment if the permittee demonstrates the alternative procedure is capable of detecting a pressure loss or rise. [§63.180(f)(5)]

(f) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart. [§63.180(g)]

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off. [§63.180(g)(1)]

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure. [§63.180(g)(2)]

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected. [§63.180(g)(3)]
(4) An alternative procedure may be used for leak testing the equipment, if the permittee demonstrates the alternative procedure is capable of detecting losses of fluid. [§63.180(g)(4)]

Recordkeeping:

(a) Recordkeeping requirements. [§63.1363(g)]
(1) The permittee of more than one group of processes subject to the provisions of this section 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. [§63.1363(g)(1)]
(2) General recordkeeping. Except as provided in §63.1363(g)(5), the following information pertaining to all equipment subject to the requirements in this section shall be recorded: [§63.1363(g)(2)]
(i) Information required [§63.1363(g)(2)(i)]
(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to §63.1363(f), need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors 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 within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored. [§63.1363(g)(2)(i)(A)]
(B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of subpart H of this part and valves subject to the provisions of §63.1363(e)(4). [§63.1363(g)(2)(i)(B)]
(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(2)(i)(C)]
(ii) Identification numbers [§63.1363(g)(2)(ii)]
(A) 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 §63.1363(c)(7) or §§63.164(h) or 63.165(c) of subpart H of this part. [§63.1363(g)(2)(ii)(A)]
(B) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.164(i) of subpart H of this part. [§63.1363(g)(2)(ii)(B)]
(iii)Identification numbers [§63.1363(g)(2)(iii)]
(A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of subpart H of this part. [§63.1363(g)(2)(iii)(A)]

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of subpart H of this part. [§63.1363(g)(2)(iii)(B)]

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified. [§63.1363(g)(2)(iv)]

(v) The following information shall be recorded for each dual mechanical seal system: [§63.1363(g)(2)(v)]

(A) Design criteria required by §63.1363(c)(5)(vi)(A) and §63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and [§63.1363(g)(2)(v)(A)]

(B) Any changes to these criteria and the reasons for the changes. [§63.1363(g)(2)(v)(B)]

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under §63.1363(f) and a copy of the plan for monitoring this equipment. [§63.1363(g)(2)(vi)]

(vii) A list of connectors removed from and added to the process, as described in §63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used. [§63.1363(g)(2)(vii)]

(viii) For batch processes that the permittee elects to monitor as provided under §63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored. [§63.1363(g)(2)(viii)]

(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1363(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 §63.1363(g)(4) for leaking equipment identified in this inspection, except as provided in §63.1363(g)(5). These records shall be retained for 5 years. [§63.1363(g)(3)]

(4) Monitoring records. When each leak is detected as specified in §63.1363(c) and (e) and §§63.164, 63.169, and 63.174 of subpart H of this part, the permittee shall record the information specified in §63.1363(g)(4)(i) through (viii). All records shall be retained for 5 years, in accordance with the requirements of §63.10(b)(1) of subpart A of this part. [§63.1363(g)(4)]

(i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1363(g)(4)(i)]

(ii) The date the leak was detected and the date of first attempt to repair the leak. [§63.1363(g)(4)(ii)]

(iii) The date of successful repair of the leak. [§63.1363(g)(4)(iii)]

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR Part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. [§63.1363(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. [§63.1363(g)(4)(v)]

(A) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.1367(a), for the source or may

be part of a separate 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. [§63.1363(g)(4)(v)(A)]

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1363(g)(4)(v)(B)]

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1363(g)(4)(vi)]

(vii) Monitoring [§63.1363(g)(4)(vii)]

(A) If the alternative in §63.174(c)(1)(ii) of subpart H of this part 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) of subpart H of this part, as described in §63.174(c)(1) of subpart H of this part. [§63.1363(g)(4)(vii)(A)]

(B) The date and results of follow-up monitoring as required in §63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1363(g)(4)(vii)(B)]

(viii) The date and results of the monitoring required in §63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii)of subpart H of this part. 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. [§63.1363(g)(4)(viii)]

(ix) Copies of the periodic reports as specified in §63.1363(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1363(g)(4)(ix)]

(5) Records of pressure tests. The permittee who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of §63.1363(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1363(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. [§63.1363(g)(5)(i)]

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the permittee does not adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii) of subpart H of this part. [§63.1363(g)(5)(ii)]

(iii) 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 this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(5)(iii)]

(iv) The dates of each pressure test required in §63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. [§63.1363(g)(5)(iv)]

(v) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1363(g)(5)(v)]

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: [§63.1363(g)(5)(vi)]
(A) The date of each pressure test and the date of each leak repair attempt. [§63.1363(g)(5)(vi)(A)]
(B) Repair methods applied in each attempt to repair the leak. [§63.1363(g)(5)(vi)(B)]
(C) The reason for the delay of repair. [§63.1363(g)(5)(vi)(C)]
(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1363(g)(5)(vi)(D)]
(E) The date of successful repair. [§63.1363(g)(5)(vi)(E)]

(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) of subpart H of this part 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) of subpart H of this part. The results shall include: [§63.1363(g)(6)]
(i) The background level measured during each compliance test. [§63.1363(g)(6)(i)]
(ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1363(g)(6)(ii)]

(7) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1363(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1363(b)(3)(ii). The records specified in §63.1363(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1363(g) (7)(ii) and (iii) shall be retained for 5 years. [§63.1363(g)(7)]
(i) The design specifications and performance demonstrations specified in §63.1363(g)(7)(i)(A) through (C). [§63.1363(g)(7)(i)]
(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1363(g)(7)(i)(A)]
(B) The dates and descriptions of any changes in the design specifications. [§63.1363(g)(7)(i)(B)]
(C) A description of the parameter or parameters monitored, as required in §63.1363(b)(3)(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. [§63.1363(g)(7)(i)(D)]
(ii) Records of operation of closed-vent systems and control devices. [§63.1363(g)(7)(ii)]
(A) Dates and durations when the closed-vent systems and control devices required in §63.1363(c) and §§63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters. [§63.1363(g)(7)(ii)(A)]
(B) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1363(g)(7)(ii)(B)]
(C) Dates and durations of startups and shutdowns of control devices required in §63.1363(c) of this section and §§63.164 through 63.166 of subpart H of this part. [§63.1363(g)(7)(ii)(C)]
(iii) Records of inspections of closed-vent systems subject to the provisions of §63.172 of subpart H of this part. [§63.1363(g)(7)(iii)]
(A) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (2) of subpart H of this part 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. [§63.1363(g)(7)(iii)(A)]

(B) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in §63.1363(g)(4) shall be recorded. [§63.1363(g)(7)(iii)(B)]

(8) 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/vapor 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. [§63.1363(g)(8)]

(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section. [§63.1363(g)(9)]

(10) Records of Inspections. The permittee shall keep records specified in §63.1367(f)(1) through (6). [§63.1367(f)]

(i) 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 §63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(1)]

(ii) 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 §63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(2)]

(iii) 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 §63.1367(f)(3)(i) or (ii). [§63.1367(f)(3)]

(A) Hourly records of whether the flow indicator specified under §63.1362(j)(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. [§63.1367(f)(3)(i)]

(iv) For each inspection conducted in accordance with §63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1367(f)(4)(i) through (ix). [§63.1367(f)(4)]

(A) Identification of the leaking equipment. [§63.1367(f)(4)(i)]

(B) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1366(h)(3); or a record of that the leak was detected by sensory observations. [§63.1367(f)(4)(ii)]

(C) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1367(f)(4)(iii)]

(D) Maximum instrument reading measured by the method specified in §63.1366(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1367(f)(4)(iv)]

(E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1367(f)(4)(v)]

(F) The name, initials, or other form of identification of the permittee (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1367(f)(4)(vi)]

(G) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1367(f)(4)(viii)]
(H) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1367(f)(4)(viii)]
(I) The date of successful repair of the leak. [§63.1367(f)(4)(ix)]

(v) For each inspection conducted in accordance with §63.1366(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. [§63.1367(f)(5)]

(vi) For each visual inspection conducted in accordance with §63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1367(f)(6)]

Reporting:

(a) Reporting Requirements. [§63.1363(h)]

(1) The permittee of a source subject to this section shall submit the reports listed in §63.1363(h)(1)(i). [§63.1363(h)(1)]

(i) Periodic reports described in §63.1363(h)(3). [§63.1363(h)(1)(ii)]

(2) Periodic reports. The permittee of a source subject to this section shall submit Periodic reports. [§63.1363(h)(3)]

(i) A report containing the information in §63.1363(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [§63.1363(h)(3)(i)]

(ii) For equipment complying with the provisions of §63.1363(b) through (g), the Periodic report shall contain the summary information listed in §63.1363(h)(3)(ii)(A) through (L) for each monitoring period during the 6-month period. [§63.1363(h)(3)(ii)]

(A) The number of valves for which leaks were detected as described in §63.1363(e)(2), the percent leakers, and the total number of valves monitored; [§63.1363(h)(3)(ii)(A)]
(B) The number of valves for which leaks were not repaired as required in §63.1363(e)(7), identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(B)]
(C) The number of pumps and agitators for which leaks were detected as described in §63.1363(c)(2), the percent leakers, and the total number of pumps and agitators monitored; [§63.1363(h)(3)(ii)(C)]
(D) The number of pumps and agitators for which leaks were not repaired as required in §63.1363(c)(3); [§63.1363(h)(3)(ii)(D)]
(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part; [§63.1363(h)(3)(ii)(E)]
(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part; [§63.1363(h)(3)(ii)(F)]
(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; [§63.1363(h)(3)(ii)(G)]

(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(H)]
(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1363(h)(3)(ii)(I)]
(J) The results of all monitoring to show compliance with §§63.164(i) and 63.165(a) of subpart H of this part conducted within the semiannual reporting period. [§63.1363(h)(3)(ii)(J)]
(K) If applicable, the initiation of a monthly monitoring program under either §63.1363(c)(4)(ii) or §63.1363(e)(4)(i)(A). [§63.1363(h)(3)(ii)(K)]
(L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of subpart H of this part. [§63.1363(h)(3)(ii)(L)]

(iii) For permittees electing to meet the requirements of §63.178(b) of subpart H of this part, the Periodic report shall include the information listed in §63.1363(h)(3)(iii) (A) through (E) for each process. [§63.1363(h)(3)(iii)]
(A) Product process equipment train identification; [§63.1363(h)(3)(iii)(A)]
(B) The number of pressure tests conducted; [§63.1363(h)(3)(iii)(B)]
(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1363(h)(3)(iii)(C)]
(D) The facts that explain any delay of repairs; and [§63.1363(h)(3)(iii)(D)]
(E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of this part. [§63.1363(h)(3)(iii)(E)]

(iv) Any change in the information submitted under §63.1363(h)(2) shall be provided in the next Periodic report. [§63.1363(h)(3)(iv)]

PERMIT CONDITION (EU0062 through EU0069)-003 and EU0072-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Process vents subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall reduce the uncontrolled organic HAP emissions from a process vent by 98 percent by weight or greater. [§63.1362(b)(2)(ii)(A)]
(b) HCl and Cl_2 emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater. [§63.1362(b)(3)(ii)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION EU0061-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Storage Vessels subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall either determine the group status of a storage vessel or designate it as a Group 1 storage vessel. If the permittee elects to designate the storage vessel as a Group 1 storage vessel, the permittee is not required to determine the maximum true vapor pressure of the material stored in the storage vessel. [§63.1362(c)(1)]

(b) Except as specified in §63.1362(c)(5), the permittee of a Group 1 storage vessel at an existing affected source, as defined in §63.1361, shall equip the affected storage vessel with the following: [§63.1362(c)(2)]

(1) A closed vent system meeting the conditions of §63.1362(j) and a control device that meets the following condition: [§63.1362(c)(2)(iv)]

(i) Reduces organic HAP emissions by 95 percent by weight or greater;[§63.1362(c)(2)(iv)(A)]

(c) The permittee is exempt from the specifications in §63.1362(c)(2) through (4) during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage vessel between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. [§63.1362(c)(5)]

(d) Compliance with the provisions of §63.1362(c)(2) is demonstrated using the initial compliance procedures in §63.1365(d) and the monitoring requirements in §63.1366.. [§63.1362(c)(7)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION (EU0070, EU0071, EU0076, and EU0077)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Wastewater and Wastewater Tanks subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

Wastewater and wastewater tanks

(a) The permittee of each affected source shall comply with the requirements of §§63.132 through 63.147. [§63.1362(d)]

(1) The permittee shall comply with the requirements in §63.132(a)(2), no later than December 23, 2003. .[§63.132(a) and §63.1362(d)(11)]

(i) For wastewater streams that are Group 1 for Table 9 compounds, comply with §63.132(a)(2)(i). .[§63.132(a)(2)]

(A) Comply with the applicable requirements for wastewater tanks as specified in §63.133 through §63.137 of this subpart, except as provided in paragraphs §63.132(a)(2)(i)(A) and (a)(2)(i)(B). .[§63.132(a)(2)(i)]

(1) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions. .[§63.132(a)(2)(i)(A)]
(2) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices. .[§63.132(a)(2)(i)(B)]

(2) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the permittee shall comply with the requirements of either §63.133(a)(1) or (a)(2) as specified in table 10 of this subpart. [§63.133(a)] Note: Table 10 is presented in the Statement of Basis
(i) The permittee shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged, the permittee shall comply with the requirements specified in §63.133(a)(2). .[§63.133(a)(1)]
(ii) The permittee shall comply with the requirements in §63.133(b), (g) and (h) and shall operate and maintain the emission control technique listed in §63.133(a)(2)(i). .[§63.133(a)(2)]
(A) A fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device. .[§63.133(a)(2)(i)]

(3) If the permittee elects to comply with the requirements of §63.133(a)(2)(i), the fixed roof shall meet the requirements of §63.133(b)(1).[§63.133(b)]
(i) The fixed-roof shall meet the following requirements: .[§63.133(b)(1)]
(A) 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 §63.1366(h), §63.1367(f), and §63.1368(g)(2)(iii) and (ix) of this subpart. .[§63.133(b)(1)(i) and §63.1362(d)(16)]
(B) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. [§63.133(b)(1)(ii)]

(4) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.139 of this subpart. .[§63.133(b)(2)]

(5) Except as provided in §63.133(b)(4), the closed-vent system shall be inspected in accordance with the requirements of §63.148 of this subpart. .[§63.133(b)(3)]

(6) Each wastewater tank shall be inspected for control equipment failures as defined in§63.133(g)(1) according to the schedule in §63.133(g)(2) and (g)(3). .[§63.133(g)]
(i) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in §63.133(g)(1)(ix). .[§63.133(g)(1)]
(A) A gasket, joint, lid, cover, or door has a crack or gap, or is broken. .[§63.133(g)(1)(ix)]
(ii) The permittee shall inspect for the control equipment failures in §63.133(g)(1)(ix) initially, and semi-annually thereafter. .[§63.133(g)(3)]

(7) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 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 this section cannot

be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the permittee may utilize up to 2 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 vessel will be emptied as soon as practical. [§63.133(h)]

(8) The permittee shall treat the wastewater stream or residual in a unit identified in, and complying with, §63.138(h)(1). These units are exempt from the design evaluation or performance tests requirements specified in §63.138(a)(3) and §63.138(j) of this subpart, and from the monitoring requirements specified in §63.132(a)(2)(iii) and §63.132(b)(3)(iii) of this subpart, as well as recordkeeping and reporting requirements associated with monitoring and performance tests. [§63.138(h)]

(i) The wastewater stream 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; .[§63.138(h)(1)]

(9) *Residuals.* For each residual removed from a Group 1 wastewater stream, the permittee shall control for air emissions by complying with §§63.133–137 of this subpart and by complying with §63.138(k)(4). .[§63.138(k)]

(i) Comply with the requirements for RCRA treatment options specified in §63.138(h) of this subpart. .[§63.138(k)(4)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION (EU0081 through EU0086)-001

10 CSR 10-6.060 Construction Permits Required
Construction Permit 102009-007, Issued October 16, 2009

Operational Limitation:

1. The permittee shall control emissions from the drying system (IMI1-07) and handling operations (IMI1-05, IMI1-09, IMI1-10, and IMI1-12) using baghouses as specified in the permit application. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. [Special Condition #2.A.]
2. The baghouses shall be equipped with gauges or meters that indicate the pressure drop across them. The gauges or meters shall be located such that they can be easily observed by the Department of Natural Resources' personnel. [Special Condition #2.B]
3. The permittee shall keep replacement bags on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature, acidic and alkali resistance, abrasion resistance, etc.). [Special Condition #2.D.]
4. The permittee shall operate HEPA filter systems downstream of the handling baghouses (IMI1-05 and IMI1-10). [Special Condition #3.A.]
5. The permittee shall operate unit cartridge filters downstream of the packaging baghouse (IMI1-09). [Special Condition #3.B.]
6. The permittee shall keep replacement filters on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature, acidic and alkali resistance, abrasion resistance, etc.). [Special Condition #3.E.]

7. The permittee shall operate a direct contact condenser downstream of the drying system baghouse (IMI1-07) as specified in the permit application. The condenser shall be in use at all times when the drying system is in operation. The direct contact condenser shall be operated and maintained in accordance with the manufacturer's specifications. [Special Condition #4.]
8. The permittee shall control the emissions from the IMI1 production process using a caustic scrubber followed by the existing hazardous waste incinerators, as specified in the permit application. The caustic scrubber and incinerators shall be in use at all times when the IMI1 plant is in operation. The caustic scrubber and incinerators shall be operated and maintained in accordance with the manufacturer's specifications. The incinerators shall be in compliance with MACT 40 CFR Part 63 Subpart EEE-National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. [Special Condition #5]
9. If a continuing situation of demonstrated nuisance odors exists in violation of Missouri State Rules 10 CSR 10-3.090, Restriction of Emission of Odors, the Director may require that the permittee submit a corrective action plan within ten (10) days adequate to timely and significantly mitigate the odors. The permittee shall implement any such plan immediately upon its approval by the Director. Failure either to submit or implement such a plan shall be a violation of the permit. [Special Condition #9]

Monitoring/Record Keeping:

1. The permittee shall monitor and record the operating pressure drop across the baghouses at least once a day during periods of operation. The operating pressure drop shall be maintained in accordance with the manufacturer's performance warranty. [Special Condition #2.C.]
2. The permittee shall monitor and record the pressure drop of the HEPA filter system per standard operating procedure and replace the filters as needed. [Modified Special Condition #3.C.]
3. The permittee shall monitor and record the opacity of the gas from the cartridge filter per standard operating procedure to determine if the cartridge filter is operating properly and replace the filters as needed. [Modified Special Condition #3.D.]
4. The permittee shall maintain an operating and maintenance log for the baghouses, HEPA filters, cartridge filters, condensers, and incinerators that include the following: [Special Condition #6.]
   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, replacements, etc.
5. Attachments D (maintenance) and E (pressure drop) contain logs including these record keeping requirements. These logs, or equivalents created by the permittee, must be used to certify compliance with this requirement.
6. The permittee shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [Special Condition #8.]

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

PERMIT CONDITION (EU0081 through EU0086)-002

10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

Emission Limitation:

1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

Monitoring/Record Keeping/Reporting:

As detailed in Core Permit Requirements.

IMI-2 Production Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0087	IMI-2 1	Toluene Storage Tank (process# 110-029); 13,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-001)
EU0088	IMI-2 3	Methanol/Tetrahydrofuran Storage Tank (process #110-039); 13,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-005)
EU0088A	IMI-2 4	Dimethyl Sulfoxide/Acetic Acid/Sodium Methoxide Storage Tank (process #110-007); 13,500 gallon capacity; Installed 1988	Chilled Water Condenser (process #631-002)
EU0089	IMI-2 7	Process Section 120: Diacid Handling	NaOCH3 Scrubber (process #631-060X), followed by HEPA filter
EU0090	IMI-2 8A/B	Process Section 120: Sodium Methoxide Handling	process vent condensers, followed by a seal pot, followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0091	IMI-2 8A/B	IMI-2 Waste Storage Section 630; Aqueous Waste Hold Tank (process # 633-010)	seal pot followed by Caustic Scrubber (process #631-205); followed by RCRA Incinerators
EU0092	IMI-2 8A/B	IMI-2 Waste Storage Section 630; Organic Waste Hold Tank (process #633-016)	seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0093	IMI-2 8A/B	IMI-2 Process Section 160	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0094	IMI-2 8A/B	IMI-2 Process Section 130	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0095	IMI-2 8A/B	IMI-2 Process Section 150	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0096	IMI-2 8A/B	IMI-2 Process Section 180	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0097	IMI-2 8A/B	IMI-2 Process Section 210	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0098	IMI-2 8A/B	IMI-2 Process Section 190	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0099	IMI-2 8A/B	Mother Liquor Storage Tank (process #190-005)	process vent condensers followed by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators
EU0100	IMI-2 8A/B	Process Section 200; Wet Product Centrifuge	Product scrubber (process #631-070) to seal pot followed by caustic scrubber (process #631-205); (IMI2-10)Packaging Baghouse (process #631-068) followed by HEPA filter (process #631-XXX)
EU0101	IMI-2 10	Process Section 200; Product drying/packaging system	Packaging Baghouse (process #631-068) followed by HEPA filter (process #631-XXX)
EU0102	IMI-2 8B	IMI-2 Facility Fumes bypass for HazWaste incinerators from Caustic Scrubber (631-205)	none
EU0103	IMI-2 9/9A	IMI-2 Process Section 170	process vent condensers followed by Flare (process #631-026X)
EU0104	IMI-2 9A	Emergency Bypass for Flare (process #631-026X)	none
EU0105	IMI-2 11	Drain Hold Tank (process #633-013)	none
EU0106	IMI-2 12	Drumming Area Hold Tank (process #633-019)	none

PERMIT CONDITION (EU0087 through EU0089, and EU0101)-001

10 CSR 10-6.060,Construction Permits Required, Construction Permit Number: 102008-001, Issued on October 10, 2008

Operation Limitation:

1. The permittee shall control the emissions from the Packaging Area (IMI-2 10) using a baghouse as specified in the permit application. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the DNR employees may easily observe them. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). [Special Condition #2.A.]
2. The permittee shall operate the wet scrubber associated with the sodium methoxide ($NaOCH_3$) processing (IMI-2 7) to control process emissions. The wet scrubber shall be in operation at all times $NaOCH_3$ processing equipment is in use. The wet scrubber shall be operated and maintained in accordance with the manufacturer's specifications. [Special Condition #4.A]
3. The permittee shall operate the chilled water condensers (process #'s:631-001, 631-005, and 631-002) to control process emissions except when storing acetic acid. The chilled water condensers shall be in operation at all times when the storage tanks (IMI-2-01, IMI-2-03, and IMI-2-04) associated with them are in use. The chilled water condensers shall be operated and maintained in accordance with the manufacturer's specifications. [Special Condition #4.B.]
4. The permittee shall control the process vent emissions using the existing IMI-2 fume system and the North Waste Management area's hazardous waste incinerators as specified in the permit application. The existing incinerators shall be operated and maintained in accordance with the manufacturer's specifications and the MACT standard, 40 CFR Part 63 Subpart EEE-National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. [Special Condition #3.A.]

Monitoring/Recordkeeping:

1. The permittee shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours while the unit is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. [Special Condition #2.B.]
2. The permittee shall maintain an operating and maintenance log for the baghouse which shall include the following: [Special Condition #2.C.]
   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.
3. The permittee shall maintain an operating, maintenance, and inspection log for the wet scrubber and each of the chilled water condensers which shall include the following: [Special Condition #4.C.]
   a) Incidents of malfunction(s) including the date(s) and duration of the event, the probable cause, any corrective actions taken and the impact on emissions due to the malfunction;
   b) Any maintenance activities conducted on the unit, such as replacement of equipment, etc.; and

c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.

4. The permittee shall maintain an operating and maintenance log for the hazardous waste incinerators which shall include the following: [Special Condition #3.B.]
   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. Attachments D (maintenance) and E (pressure drop) contain logs including these record keeping requirements. These logs, or equivalents created by the permittee, must be used to certify compliance with this requirement.
6. The permittee shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' (DNR) personnel upon request.

Reporting:

Any records indicating noncompliance with the condition of Permit No. 082005-014 must be reported to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, within ten days of discovery of the noncompliance.

PERMIT CONDITION (EU0089 and EU0101)-002

10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

Emission Limitation:

1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

Monitoring/Record Keeping/Reporting:

As detailed in Core Permit Requirements.

PERMIT CONDITION (EU0087, EU0088, EU0090 through EU0100), and EU0102 through EU0107)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM. The individual requirements for each type of equipment are detailed in following Permit Conditions.

General Conditions:

Emission Limitations/Operating Limitations:

a) On and after December 23, 2003, the permittee of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in §63.1363, as summarized in Table 2 to Subpart MMM of Part 63. [§63.1362(a)]
b) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions regarding construction and reconstruction in §63.5 of subpart A of this part. [§63.1367(a)(5)]

c) Opening of a safety device. Opening of a safety device, as defined in §63.1361, is allowed at any time conditions require it to avoid unsafe conditions. [§63.1362(i)]
d) Closed-vent systems. The permittee of a 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 §63.1362(b) through (d) shall comply with the requirements of Table 3 of this subpart and paragraph §63.1362(j)(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. [§63.1362(j)]
   (1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in §63.1367(f)(1). 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 [§63.1362(j)(1)]
   (2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in §63.1367(f)(2). [§63.1362(j)(2)]

Recordkeeping:
(a) The permittee shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in §63.1367(a)(1) through (5). [§63.1367(a)]
   (1) The permittee of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part. [§63.1367(a)(1)]

Reporting:
(a) The permittee shall comply with the reporting requirements of §63.1368(b) through (l). The permittee shall also comply with applicable paragraphs of §§63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart. [§63.1368(a)]
(b) The permittee who is subject to §63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to these standards. The application shall be prepared in accordance with §63.5(d) of subpart A of this part. [§63.1368(c)]

Startup, Shutdown, Malfunction:
SSM Plan:
The permittee shall develop a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The permittee of an affected source shall keep the current and superseded versions of this plan onsite, as specified in §63.6(e)(3)(v) of subpart A of this part. The permittee shall keep the startup, shutdown, and malfunction records specified in paragraphs §63.1367(a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in §63.1368(i). [§63.1367(a)(3)]
(i) The permittee shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with subpart MMM of this part, as specified in §63.6(e)(3)(iii). [§63.1367(a)(3)(i)]

(ii) The permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subpart MMM of this part. [§63.1367(a)(3)(ii)]
(iii) For each startup, shutdown, or malfunction, the permittee shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in §63.6(e)(3)(iii) of subpart A of this part; alternatively, the permittee shall record any actions taken that are not consistent with the plan, as specified in §63.6(e)(3)(iv) of subpart A of this part. [§63.1367(a)(3)(iii)]

Reporting:
For the purposes of subpart MMM of this part, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under §63.1368(g) instead of the schedule specified in §63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in §63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the permittee or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time the permittee takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee shall submit an immediate startup, shutdown, and malfunction report as specified in §63.10(d)(5)(ii) of subpart A of this part. [§63.1368(i)]

PERMIT CONDITION (EU0087, EU0088, EU0090 through EU0100), and EU0102 through EU0107)-002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM.
Standards for Equipment Leaks:
Emission Limitation/Monitoring-General Equipment Leaks:
(a) General equipment leak requirements. [§63.1363(a)]
(1) The provisions of this section apply to “equipment” as defined in §63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section. [§63.1363(a)(1)]
(2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: [§63.1363(a)(2)]
(i) 40 CFR Part 60. [§63.1363(a)(2)(i)]
(ii) 40 CFR Part 61. [§63.1363(a)(2)(ii)]
(3) The provisions in §63.1(a)(3) of subpart A of this part do not alter the provisions in §63.1363(a)(2). [§63.1363(a)(4)]
(4) Lines and equipment not containing process fluids are not subject to the provisions of §63.1363. 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. [§63.1363(a)(5)]
(5) The provisions of §63.1363 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 this subpart MMM. [§63.1363(a)(6)]

(6) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. 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 15 calendar days of the end of each monitoring period for that component. [§63.1363(a)(7)]

(7) Equipment that is in vacuum service is excluded from the requirements of this section. [§63.1363(a)(8)]

(8) 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 this section if it is identified as required in §63.1363(g)(9). [§63.1363(a)(9)]

(9) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c) of subpart H of this part, the following requirements apply: [§63.1363(a)(10)]

(i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1363(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 §63.1363(e)(7)(iii), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply with §63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring. [§63.1363(a)(10)(ii)]

(iii) The identification on equipment, except as specified in §63.1363(a)(10)(ii), may be removed after it has been repaired. [§63.1363(a)(10)(iii)]

(b) The permittee shall comply with the provisions of subpart H of this part as presented below. When the term “process unit” is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes. [§63.1363(b)]

Standards: Compressors.

(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 §63.1363(a) of this subpart 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)]

(i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]

(ii) 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 §63.1362; or [§63.164(b)(2)]

(iii) 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)]

(5) Seal systems [§63.164(e)]

(i) 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)]

(ii) 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)]

(6) 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)]

(7) Leak repair [§63.164(g)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.164(g)(1)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.164(g)(2)]

(8) 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 §63.1362 of this subpart. [§63.164(h)]

(9) Any compressor that is designated, as described in §63.1363(g), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i) and §63.1363(b)(1)(vii)]

(i) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and [§63.164(i)(1)]

(ii) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Administrator. [§63.164(i)(2)]

Standards: 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 parts per million above background except as provided in §63.165(b), as measured by the method specified in §63.180(c) of this subpart. [§63.165(a)]

(2) Pressure releases [§63.165(b)]

(i) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(b)(1)]

(ii) No later than 5 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 parts per million above background, as measured by the method specified in §63.180(c) of this subpart. [§63.165(b)(2)]

(3) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.1362 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]

(4) Rupture disks [§63.165(d)]

(i) 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)]

(ii) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(d)(2)]

Standards: 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 §63.1363(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a) and §63.1363(b)(1)(i)]

(2) Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]

(i) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]

(ii) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]

(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.1362; or [§63.166(b)(3)]

(iv) 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)]

(A) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]

(C) 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: 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 5 calendar days by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), 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), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.169(a)]

(2) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or

greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]

(3) Leaks [§63.169(c)]
   (i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.169(c)(1)]
   (ii) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.169(c)(2)]
   (iii) 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)]

(4) First attempts at repair include, but are not limited to, the practices described under §§63.1363(c) and 63.1363(e) of this subpart, for pumps and valves, respectively. [§63.169(d), §63.1363(b)(1)(iii), and §63.1363(b)(1)(v)]

Standards: Delay of repair.

(1) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist: [§63.1363(b)(3)(i)]
   (i) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1363(b)(3)(i)(A)]
   (ii) 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. [§63.1363(b)(3)(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)]
   (i) 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)]
   (ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.1362. [§63.171(c)(2)]

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [§63.171(e)]

Standards: Closed-vent systems and control devices.

(1) Permittees of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]

(2) 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)]

(i) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]
  (A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]
  (B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]
(ii) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]
  (A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172 (f)(2)(i)]
  (B) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]

(3) Each closed-vent system shall be inspected according to the procedures in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.172(g)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i) of this section. [§63.172(h)]
  (i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.172(h)(1)]
  (ii) 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)]

(5) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the 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 process unit shutdown. [§63.172(i)]

(6) 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)]
  (i) 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) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]
  (ii) 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)]
  (iii) 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)]

(7) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. [§63.172(m)]

(8) After the compliance dates specified in §63.100 of subpart F of this part, the permittee of any control device subject to this subpart 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 this subpart, 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 this subpart. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1363(h). [§63.172(n)]

Standards: Connectors in gas/vapor service and in light liquid service.

(1) The permittee of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1363(a) and §63.1363(f) of this subpart , at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(a) and §63.1363(b)(1)(i)]

(i) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v). [§63.174(a)(1)]

(ii) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. [§63.174(a)(2)]

(2) The permittee shall monitor for leaks at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(b) and §63.1363(b)(3)(iii)(A)]

(i) 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. [§63.1363(b)(3)(iii)(C)]

(ii) 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 last required monitoring period, monitoring shall be performed once every 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period. [§63.1363(b)(3)(iii)(D)]

(iii) The permittee shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in §63.1363(b)(3)(iii)(D), the first 4 years specified in §63.1363(b)(3)(iii)(G), or the entire 8 years specified in §63.1363(b)(3)(iii)(G). At the end of that 2-year monitoring period, the permittee shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the permittee may again elect to monitor in accordance with §63.1363(b)(3)(iii)(D) or (G), as applicable. [§63.1363(b)(3)(iii)(E)]

(iv) If the permittee complying with the requirements of §63.1363(b)(3)(iii)(D) or (G) for a group of processes determines that 1 percent or greater of the connectors are leaking, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of §63.1363(b)(3)(iii)(D) or (G) after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking. [§63.1363(b)(3)(iii)(F)]

(v) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 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 §63.1363(b)(3)(iii)(D), (E), or (F). [§63.1363(b)(3)(iii)(G)]

(3) Connectors

(i) Open connectors

(A) 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 3 months after being returned to organic hazardous air pollutants 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)]

(B) As an alternative to the requirements in §63.174(c)(1)(i), a 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 §63.1363(b)(3)(iii)(C) through (G), 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)]

(C) A permittee may switch alternatives described in §63.174(c)(1) (i) and (ii) at the end of the current monitoring period he is in, provided that it is reported as required in §63.1363(h) of this subpart 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) and §63.1363(b)(1)(viii)]

(ii) As an alternative to the requirements of §63.1363(b)(3)(iii)(C) through (G), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in §63.174(c)(2)(iv) may: [§63.174(c)(2)]

(A) Comply with the requirements of §63.169 of this subpart, and [§63.174(c)(2)(i)]

(B) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d). [§63.174(c)(2)(ii)]

(C) The provisions of §63.174(c)(2) apply to screwed connectors installed before November 10, 1997. [§63.174(c)(2)(iv)]

(4) 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 §63.1363(f) and in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [§63.174(d)]

(5) For use in determining the monitoring frequency, as specified in §63.1363(b)(3)(iii)(C) through (G), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]

(i) For the first monitoring period, use the following equation: [§63.174(i)(1)]

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

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

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

C_C = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(ii) For subsequent monitoring periods, use the following equation: [§63.174(i)(2)]

$$\%C_L = \left[\frac{(C_L - C_{AN})}{(C_t + C_c)}\right] \times 100$$

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1363(b)(3)(iii)(C) through (G) and §63.174 (c), not to exceed 2 percent of the total connector population, C_t.

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

C_C = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(6) Optional credit for removed connectors. If a permittee eliminates a connector subject to monitoring under §63.1363(b)(3)(iii)(C) through (G), 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). [§63.174(j)]

(i) The connector was welded after November 10, 1997. [§63.174(j)(1)]

(ii) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]

(iii) Welds created after November 10, 1997 but before June 23, 1999 are monitored or tested by 3 months after December 23, 2003. [§63.174(j)(3)]

(iv) Welds created after June 23, 1999 are monitored or tested within 3 months after being welded. [§63.174(j)(4)]

(v) 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 this subpart. [§63.174(j)(5)]

Alternative means of emission limitation: Batch processes.

(1) As an alternative to complying with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b), § 63.171, and §63.174, the permittee of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in §63.178(b) and (c), with the differences specified in §63.1363(b)(3)(iv), or the permittee may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The permittee may switch among the alternatives provided the change is documented as specified in §63.1363(g). [§63.178(a)]

(2) The following requirements shall be met if a permittee elects to use pressure testing of process equipment to demonstrate compliance with this subpart. A permittee who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.1363(c), §63.1363(e), and §63.169 of this subpart. [§63.178(b)]

(i) Each time equipment is reconfigured for production of a different product or intermediate, the process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service. [§63.178(b)(1)]

(A) When the process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment. [§63.178(b)(1)(i)]

(B) Each process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year. [§63.178(b)(1)(ii)]

(C) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate. [§63.178(b)(1)(iii)]

(i) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart. [§63.178(b)(2)]

(ii) Pressure tests

(A) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss. [§63.178(b)(3)(i)]

(B) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss. [§63.178(b)(3)(ii)]

(iv) Leaks

(A) If a leak is detected, it shall be repaired and the process equipment shall be retested before start-up of the process. [§63.178(b)(4)(i)]

(B) If a process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in §63.178(d) are met. [§63.178(b)(4)(ii)]

(3) The following requirements shall be met if a permittee elects to monitor the equipment to detect leaks by the method specified in §63.180(b), with the differences specified in §63.180(b)(3)(v), of this subpart to demonstrate compliance with this subpart. [§63.178(c)]

(i) The permittee shall comply with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b),, and §§63.172 through 63.174 of this subpart. [§63.178(c)(1)]

(ii) The equipment shall be monitored for leaks by the method specified in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.178(c)(2)]

(iii) The equipment shall be monitored for leaks as specified below: [§63.178(c)(3)]

(A) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit. [§63.178(c)(3)(i)]

(B) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart. [§63.178(c)(3)(ii)]

(C) Equipment other than connectors shall be monitored quarterly. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating. [§63.178(c)(3)(iii) and §63.1363(b)(3)(iv)(B)]

(D) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. A permittee may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating. [§63.178(c)(3)(iv)]

(iv) If 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 §63.178(d). [§63.178(c)(4)]

(4) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met: [§63.178(d)]

(i) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted. [§63.178(d)(1)]

(ii) The repair is made no later than 10 calendar days after delivery of the replacement equipment. [§63.178(d)(2)]

(c) Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1363(c)]

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service. [§63.1363(c)(1)]

(2) Monitoring [§63.1363(c)(2)]

(i) Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in §63.180(b), except as provided in §63.1363(f), and §63.1363(c)(5) through (9). [§63.1363(c)(2)(i)]

(ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b) of subpart H of this part, that defines a leak is: [§63.1363(c)(2)(ii)]

(A) For agitators, an instrument reading of 10,000 parts per million or greater. [§63.1363(c)(2)(ii)(A)]

(B) For pumps, an instrument reading of 2,000 parts per million or greater. [§63.1363(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 seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1363(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1363(c)(2)(iii)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(2)(iii)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(2)(iii)(B)]

(3) Repair provisions. [§63.1363(c)(3)]

(i) When a leak is detected pursuant to §63.1363(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 §63.1363(b)(3)(i). [§63.1363(c)(3)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(c)(3)(ii)]

(A) Tightening of packing gland nuts. [§63.1363(c)(3)(ii)(A)]

(B) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1363(c)(3)(ii)(B)]

(4) Calculation of percent leakers. [§63.1363(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. [§63.1363(c)(4)(i)]

(ii) If, calculated on a 1–year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the permittee shall monitor each pump once per month, until the calculated 1–year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps). [§63.1363(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 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1363(c)(4)(iii)]

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart: [§63.1363(c)(4)(iv)]

$$\% \ P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)} \right] \times 100$$

Where: $\% P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in §63.1363(c)(2)(i) and (ii)

P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1363(c)(5) and (6).

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in §63.1363(c)(5)(i)

through (vii) is exempt from the requirements of §63.1363(c)(1) through (c)(4)(iii), except as specified in §63.1363(c)(5)(iv)(A) and (vii). [§63.1363(c)(5)]

(i) Each dual mechanical seal system is: [§63.1363(c)(5)(i)]

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1363(c)(5)(i)(A)]

(B) 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 §63.1363(b)(3)(ii); or [§63.1363(c)(5)(i)(B)]

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1363(c)(5)(i)(C)]

(ii) The barrier fluid is not in light liquid service. [§63.1363(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. [§63.1363(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 §63.1363(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1363(c)(5)(iv)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(5)(iv)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(5)(iv)(B)]

(v) Each sensor as described in §63.1363(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. [§63.1363(c)(5)(v)]

(vi) Drips [§63.1363(c)(5)(vi)]

(A) 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. [§63.1363(c)(5)(vi)(A)]

(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1363(c)(5)(vi)(A), or if, based on the criteria established in §63.1363(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1363(c)(5)(vi)(B)]

(vii) When a leak is detected pursuant to §63.1363(c)(5)(iv)(A) or (vi)(B), the leak must be repaired as specified in §63.1363(c)(3). [§63.1363(c)(5)(vii)]

(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1363(c)(1) through (3). [§63.1363(c)(6)]

(7) 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 §63.1363(b)(3)(ii) is exempt from the requirements of §63.1363(c)(2) through (5). [§63.1363(c)(7)]

(8) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1363(c)(5) or (6), the group of processes is exempt from the requirements of §63.1363(c)(4). [§63.1363(c)(9)]

(d) Standards: open-ended valves or lines. [§63.1363(d)]

(1) Open ended valves or lines [§63.1363(d)(1)]

(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.1363(d)(4) through (6). [§63.1363(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 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. [§63.1363(d)(1)(ii)]

(2) 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. [§63.1363(d)(2)]

(3) 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 §63.1363(d)(1) at all other times. [§63.1363(d)(3)]

(4) 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 §63.1363(d)(1) through (3). [§63.1363(d)(4)]

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(5)]

(6) 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 §63.1363(d)(1) through (3) are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(6)]

(e) Standards: valves in gas/vapor service and in light liquid service. [§63.1363(e)]

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. [§63.1363(e)(1)]

(2) For existing affected sources, all valves subject to this section shall be monitored, except as provided in §63.1363(f) by no later than 1 year after December 23, 2003. [§63.1363(e)(2)]

(3) Monitoring. The permittee of a source subject to this section shall monitor all valves, except as provided in §63.1363(f), at the intervals specified in §63.1363(e)(4) and shall comply with all other provisions of this section, except as provided in §63.1363(b)(3)(i). [§63.1363(e)(3)]

(i) The valves shall be monitored to detect leaks by the method specified in §63.180(b) of subpart H of this part. [§63.1363(e)(3)(i)]

(ii) An instrument reading of 500 parts per million or greater defines a leak. [§63.1363(e)(3)(ii)]

(4) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1363(e)(2) the permittee shall monitor valves for leaks at the intervals specified below: [§63.1363(e)(4)]

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to §63.1363(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1363(e)(9). [§63.1363(e)(4)(i)]

(ii) For a group of processes with less than 2 percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1363(e)(4)(iii) through (v). [§63.1363(e)(4)(ii)]

(iii) For a group of processes with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters. [§63.1363(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 4 quarters. [§63.1363(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 2 years. [§63.1363(e)(4)(v)]

(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1363(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1363(e)(5)(i) through (viii) apply. [§63.1363(e)(5)]

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to §63.1363(e)(3)(i) and (ii) and as calculated according to §63.1363(e)(6)(ii) and (iii). [§63.1363(e)(5)(i)]

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1363(e)(5)(ii) (A) through (C). [§63.1363(e)(5)(ii)]

(A) The permittee shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained. [§63.1363(e)(5)(ii)(A)]

(B) 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 must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1363(e)(5)(ii)(B)]

(C) 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. [§63.1363(e)(5)(ii)(C)]

(iii) The permittee shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 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 2 percent leaking valves or greater, the permittee shall revert to the program required in §63.1363(e)(2) through (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 Equation 4 of this subpart: [§63.1363(e)(5)(iii)]

$$\% \ V_{LO} = \frac{\sum_{i=1}^{n} \left(\% \ V_{Li} \times V_i \right)}{\sum_{i=1}^{n} V_i}$$

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

$\% \ V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1363(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i

n = number of subgroups

(iv) Records. In addition to records required by §63.1363(g), the permittee shall maintain records specified in §63.1363(e)(5)(iv)(A) through (D). [§63.1363(e)(5)(iv)]

(A) Which valves are assigned to each subgroup, [§63.1363(e)(5)(iv)(A)]

(B) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1363(e)(5)(iv)(B)]

(C) Which valves are reassigned and when they were reassigned, and [§63.1363(e)(5)(iv)(C)]

(D) The results of the semiannual overall performance calculation required in §63.1363(e)(5)(iii). [§63.1363(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. [§63.1363(e)(5)(v)]

(vi) Semiannual reports. In addition to the information required by §63.1363(h)(3), the permittee shall submit in the Periodic reports the information specified in §63.1363(e)(5)(vi) (A) and (B). [§63.1363(e)(5)(vi)]

(A) Valve reassignments occurring during the reporting period, and [§63.1363(e)(5)(vi)(A)]

(B) Results of the semiannual overall performance calculation required by §63.1363(e)(5)(iii). [§63.1363(e)(5)(vi)(B)]

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1363(e)(6)(iii) shall be used. [§63.1363(e)(5)(vii)]

(viii) Except for the overall performance calculations required by §63.1363(e)(5)(i) and (iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section. [§63.1363(e)(5)(viii)]

(6) Percentage Calculations [§63.1363(e)(6)]

(i) The permittee shall decide no later than the implementation date of this subpart 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. [§63.1363(e)(6)(i)]

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: [§63.1363(e)(6)(ii)]

$$\% \ V_L = \left[\frac{V_L}{V_T}\right] \times 100$$

Where: % V_L = percent leaking valves

V_L = number of valves found leaking excluding nonrepairables as provided in §63.1363(e)(6)(iv)(A)

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1363(e)(7)(iii)

(iii) 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 2 years) monitoring frequencies, the

percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1363(e)(6)(iii)]

(iv) Nonrepairable valves [§63.1363(e)(6)(iv)]

(A) 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 §63.1363(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 1 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. [§63.1363(e)(6)(iv)(A)]

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1363(e)(6)(iv)(B)]

(7) Repair provisions. [§63.1363(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 §63.1363(b)(3)(i). [§63.1363(e)(7)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.1363(e)(7)(ii)]

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-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.” [§63.1363(e)(7)(iii)]

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking. [§63.1363(e)(7)(iii)(A)]

(B) Periodic monitoring required by §63.1363(e)(2) through (4) may be used to satisfy the requirements of §63.1363(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1363(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1363(e)(7)(iii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1363(e)(7)(iii). [§63.1363(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to §63.1363(e)(7)(iii), the permittee shall follow the provisions of §63.1363(e)(7)(iii)(C)(*1*) and (*2*) to determine whether that valve must be counted as a leaking valve for purposes of §63.1363(e)(6). [§63.1363(e)(7)(iii)(C)]

(*1*) If the permittee elects to use periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1363(e)(7)(iii)(C)(1)]

(*2*) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(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. [§63.1363(e)(7)(iii)(C)(2)]

(8) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(e)(8)]

(i) Tightening of bonnet bolts, [§63.1363(e)(8)(i)]

(ii) Replacement of bonnet bolts, [§63.1363(e)(8)(ii)]
(iii) Tightening of packing gland nuts, and [§63.1363(e)(8)(iii)]
(iv) Injection of lubricant into lubricated packing. [§63.1363(e)(8)(iv)]

(9) 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 §63.1363(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1363(e)(4)(iii), (iv), or (v), except as provided in §63.1363(f). [§63.1363(e)(9)]

(f) Unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [§63.1363(f)]

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in §63.1363(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1363(f)(2), (3), or (4), as applicable. All equipment, except connectors that meet the requirements in §63.1363(f)(4), must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1363(f)(1)]

(i) For pumps and agitators, §63.1363(c)(2), (3), and (4) do not apply. [§63.1363(f)(1)(i)]
(ii) For valves, §63.1363(e)(2) through (7) do not apply. [§63.1363(f)(1)(ii)]
(iii) For connectors, §63.174(b) through (e) and §63.1363(b)(3)(iii)(C) through (G) do not apply. [§63.1363(f)(1)(iii)]
(iv) For closed-vent systems, §63.172(f)(1), (f)(2), and (g) do not apply. [§63.1363(f)(1)(iv)]

(2) Equipment that is unsafe-to-monitor. [§63.1363(f)(2)]

(i) Valves, connectors, agitators, and any part of closed-vent systems 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 identified in §63.1363(f)(1)(i) through (iii), or the inspection requirements identified in §63.1363(f)(1)(iv). [§63.1363(f)(2)(i)]
(ii) The permittee of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed vent systems, inspections shall not be more frequent than annually. [§63.1363(f)(2)(ii)]

(3) Equipment that is difficult-to-monitor. [§63.1363(f)(3)]

(i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the permittee determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service; [§63.1363(f)(3)(i)]
(ii) The permittee of valves, agitators, or pumps designated as difficult-to-monitor must 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-monitor, the permittee must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [§63.1363(f)(3)(iii)]

(4) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1363(f)(4)]

(i) A connector may be designated as inaccessible if it is: [§63.1363(f)(4)(i)]
(A) Buried; [§63.1363(f)(4)(i)(A)]

(B) Insulated in a manner that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(B)]
(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(C)]
(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or [§63.1363(f)(4)(i)(D)]
(E) 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. [§63.1363(f)(4)(i)(E)]
(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [§63.1363(f)(4)(i)(F)]

(ii) 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 §63.1363(b)(3)(i). [§63.1363(f)(4)(iii)]

(iii) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1363(g) and (h). [§63.1363(f)(4)(iv)]

Emission Limitation/Monitoring-Vapor Suppression Equipment [§63.1366(h)]:

(a) Leak inspection provisions for vapor suppression equipment. [§63.1366(h)]

(1) Except as provided in §63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the permittee shall comply with the requirements of §63.1366(h)(2) through (8). [§63.1366(h)(1)]

(2) Except as provided in §63.1366(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(i) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(iii). [§63.1366(h)(2)]

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1366(h)(2)(i)]
(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(i)(A)]
(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(i)(B)]

(ii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1366(h)(2)(iii)]
(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(iii)(A)]
(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(iii)(B)]

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1366(h)(3)(i) through (vi). [§63.1366(h)(3)]

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, appendix A. [§63.1366(h)(3)(i)]

(ii) Detection instrument performance criteria. [§63.1366(h)(3)(ii)]

(A) Except as provided in §63.1366(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the 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. [§63.1366(h)(3)(ii)(A)]

(B) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1366(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 §63.1366(h)(3)(ii)(A). [§63.1366(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 40 CFR Part 60, appendix A. [§63.1366(h)(3)(iii)]

(iv) Calibration gases shall be as follows: [§63.1366(h)(3)(iv)]

(A) Zero air (less than 10 parts per million hydrocarbon in air); and [§63.1366(h)(3)(iv)(A)]

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. 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 §63.1366(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. [§63.1366(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. [§63.1366(h)(3)(v)]

(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance. [§63.1366(h)(3)(vi)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1366(h)(5). [§63.1366(h)(4)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.1366(h)(4)(i)]

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected. [§63.1366(h)(4)(ii)]

(5) 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 §63.1361, 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. [§63.1366(h)(5)]

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii) if: [§63.1366(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 §63.1366(h)(2)(i), (ii), or (iii); and [§63.1366(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. Inspection is not required more than once annually. [§63.1366(h)(6)(ii)]

(7) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii)(A) if: [§63.1366(h)(7)]
(i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [§63.1366(h)(7)(i)]
(ii) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. [§63.1366(h)(7)(ii)]

(8) Records shall be maintained as specified in §63.1367(f). [§63.1366(h)(8)]

(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of §63.1363, the permittee shall comply with the provisions of §63.1363 and is exempt from the requirements of this section. [§63.1366(h)(9)]

Test Methods:

(a) Each permittee subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [§63.180(a)]

(b) Monitoring, as required under this subpart, shall comply with the following requirements: [§63.180(b)]
(1) Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(1)]
(2) Detection instruments [§63.180(b)(2)]
(i) Except as provided for in §63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. [§63.180(b)(2)(i)]
(ii) If no instrument is available at the plant site that will meet the performance criteria specified in §63.180(b)(2)(i), 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 §63.180(b)(2)(i). [§63.180(b)(2)(ii)]
(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(3)]
(4) Calibration gases shall be: [§63.180(b)(4)]
(i) Zero air (less than 10 parts per million of hydrocarbon in air); and [§63.180(b)(4)(i)]
(ii) 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 §63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for

all other equipment, except as specified in §63.180(b)(4)(iii) of subpart H. [§63.180(b)(4)(ii) and §63.1363(b)(3)(v)]

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. [§63.180(b)(4)(iii)]

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.180(b)(5)]

(6) Monitoring data that do not meet the criteria specified in §63.180(b)(1)through (b)(5) may be used to qualify for less frequent monitoring under the provisions in §63.1363(e) or §63.1363(b)(3)(iii)(C) through (G) provided the data meet the conditions specified in §63.180(b)(6)(ii). [§63.180(b)(6), §63.1363(b)(1)(v), and §63.1363(b)(3)(iii)(A)]

(i) The departures from the criteria specified in §63.180(b)(1) through (b)(5) or from the specified monitoring frequency of §63.1363(e) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of appendix A of 40 CFR Part 60 instead of §63.180(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure. [§63.180(b)(6)(ii) and §63.1363(b)(1)(v)]

(c) When equipment is monitored for compliance as required in §§63.164(i), and 63.165(a) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the permittee may elect to adjust or not to adjust the instrument readings for background. If a permittee elects to not adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(b)(1) through (b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If a permittee elects to adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(c)(1) through (c)(4). [§63.180(c)]

(1) The requirements of §63.180(b) (1) through (4) shall apply. [§63.180(c)(1)]

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking. [§63.180(c)(2)]

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR Part 60, appendix A. [§63.180(c)(3)]

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance. [§63.180(c)(4)]

(d)Organic HAP service [§63.180(d)]

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used. [§63.180(d)(1)]

(2) Other methods [§63.180(d)(2)]

(i) A permittee may use good engineering judgment rather than the procedures in §63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When a permittee and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in §63.180(d)(1) shall be used to resolve the disagreement. [§63.180(d)(2)(i)]

(ii) Conversely, the permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. [§63.180(d)(2)(ii)]

(3) If a permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in §63.180(d)(1), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service. [§63.180(d)(3)]

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment. [§63.180(d)(4)]

(e) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart. [§63.180(f)]

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum. [§63.180(f)(1)]

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off. [§63.180(f)(2)]

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation: [§63.180(f)(3)]

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta\frac{P}{t}$ =Change in pressure, psig/hr.

P_f=Final pressure, psig.

P_i=Initial pressure, psig.

$t_f - t_i$ =Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the permittee shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour. [§63.180(f)(4)]

(5) An alternative procedure may be used for leak testing the equipment if the permittee demonstrates the alternative procedure is capable of detecting a pressure loss or rise. [§63.180(f)(5)]

(f) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart. [§63.180(g)]

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off. [§63.180(g)(1)]

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure. [§63.180(g)(2)]

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected. [§63.180(g)(3)]

(4) An alternative procedure may be used for leak testing the equipment, if the permittee demonstrates the alternative procedure is capable of detecting losses of fluid. [§63.180(g)(4)]

Recordkeeping:

(a) Recordkeeping requirements. [§63.1363(g)]

(1) The permittee of more than one group of processes subject to the provisions of this section 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. [§63.1363(g)(1)]

(2) General recordkeeping. Except as provided in §63.1363(g)(5), the following information pertaining to all equipment subject to the requirements in this section shall be recorded: [§63.1363(g)(2)]

(i) Information required [§63.1363(g)(2)(i)]

(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to §63.1363(f), need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors 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 within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored. [§63.1363(g)(2)(i)(A)]

(B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of subpart H of this part and valves subject to the provisions of §63.1363(e)(4). [§63.1363(g)(2)(i)(B)]

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(2)(i)(C)]

(ii) Identification numbers [§63.1363(g)(2)(ii)]

(A) 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 §63.1363(c)(7) or §§63.164(h) or 63.165(c) of subpart H of this part. [§63.1363(g)(2)(ii)(A)]

(B) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.164(i) of subpart H of this part. [§63.1363(g)(2)(ii)(B)]

(iii) Identification numbers [§63.1363(g)(2)(iii)]

(A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of subpart H of this part. [§63.1363(g)(2)(iii)(A)]

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of subpart H of this part. [§63.1363(g)(2)(iii)(B)]

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified. [§63.1363(g)(2)(iv)]

(v) The following information shall be recorded for each dual mechanical seal system: [§63.1363(g)(2)(v)]

(A) Design criteria required by §63.1363(c)(5)(vi)(A) and §63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and [§63.1363(g)(2)(v)(A)]

(B) Any changes to these criteria and the reasons for the changes. [§63.1363(g)(2)(v)(B)]

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under §63.1363(f) and a copy of the plan for monitoring this equipment. [§63.1363(g)(2)(vi)]

(vii) A list of connectors removed from and added to the process, as described in §63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used. [§63.1363(g)(2)(vii)]

(viii) For batch processes that the permittee elects to monitor as provided under §63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored. [§63.1363(g)(2)(viii)]

(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1363(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 §63.1363(g)(4) for leaking equipment identified in this inspection, except as provided in §63.1363(g)(5). These records shall be retained for 5 years. [§63.1363(g)(3)]

(4) Monitoring records. When each leak is detected as specified in §63.1363(c) and (e) and §§63.164, 63.169, and 63.174 of subpart H of this part, the permittee shall record the information specified in §63.1363(g)(4)(i) through (viii). All records shall be retained for 5

years, in accordance with the requirements of §63.10(b)(1) of subpart A of this part. [§63.1363(g)(4)]

(i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1363(g)(4)(i)]

(ii) The date the leak was detected and the date of first attempt to repair the leak. [§63.1363(g)(4)(ii)]

(iii) The date of successful repair of the leak. [§63.1363(g)(4)(iii)]

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR Part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. [§63.1363(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. [§63.1363(g)(4)(v)]

(A) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.1367(a), for the source or may be part of a separate 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. [§63.1363(g)(4)(v)(A)]

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1363(g)(4)(v)(B)]

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1363(g)(4)(vi)]

(vii) Monitoring [§63.1363(g)(4)(vii)]

(A) If the alternative in §63.174(c)(1)(ii) of subpart H of this part 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) of subpart H of this part, as described in §63.174(c)(1) of subpart H of this part. [§63.1363(g)(4)(vii)(A)]

(B) The date and results of follow-up monitoring as required in §63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1363(g)(4)(vii)(B)]

(viii) The date and results of the monitoring required in §63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii)of subpart H of this part. 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. [§63.1363(g)(4)(viii)]

(ix) Copies of the periodic reports as specified in §63.1363(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1363(g)(4)(ix)]

(5) Records of pressure tests. The permittee who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of §63.1363(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1363(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. [§63.1363(g)(5)(i)]

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the permittee does not adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii) of subpart H of this part. [§63.1363(g)(5)(ii)]

(iii) 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 this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(5)(iii)]

(iv) The dates of each pressure test required in §63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. [§63.1363(g)(5)(iv)]

(v) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1363(g)(5)(v)]

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: [§63.1363(g)(5)(vi)]

(A) The date of each pressure test and the date of each leak repair attempt. [§63.1363(g)(5)(vi)(A)]

(B) Repair methods applied in each attempt to repair the leak. [§63.1363(g)(5)(vi)(B)]

(C) The reason for the delay of repair. [§63.1363(g)(5)(vi)(C)]

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1363(g)(5)(vi)(D)]

(E) The date of successful repair. [§63.1363(g)(5)(vi)(E)]

(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) of subpart H of this part 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) of subpart H of this part. The results shall include: [§63.1363(g)(6)]

(i) The background level measured during each compliance test. [§63.1363(g)(6)(i)]

(ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1363(g)(6)(ii)]

(7) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1363(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1363(b)(3)(ii). The records specified in §63.1363(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1363(g) (7)(ii) and (iii) shall be retained for 5 years. [§63.1363(g)(7)]

(i) The design specifications and performance demonstrations specified in §63.1363(g)(7)(i)(A) through (C). [§63.1363(g)(7)(i)]

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1363(g)(7)(i)(A)]

(B) The dates and descriptions of any changes in the design specifications. [§63.1363(g)(7)(i)(B)]

(C) A description of the parameter or parameters monitored, as required in §63.1363(b)(3)(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. [§63.1363(g)(7)(i)(D)]

(ii) Records of operation of closed-vent systems and control devices. [§63.1363(g)(7)(ii)]

(A) Dates and durations when the closed-vent systems and control devices required in §63.1363(c) and §§63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters. [§63.1363(g)(7)(ii)(A)]
(B) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1363(g)(7)(ii)(B)]
(C) Dates and durations of startups and shutdowns of control devices required in §63.1363(c) of this section and §§63.164 through 63.166 of subpart H of this part. [§63.1363(g)(7)(ii)(C)]

(iii) Records of inspections of closed-vent systems subject to the provisions of §63.172 of subpart H of this part. [§63.1363(g)(7)(iii)]
(A) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (2) of subpart H of this part 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. [§63.1363(g)(7)(iii)(A)]
(B) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in §63.1363(g)(4) shall be recorded. [§63.1363(g)(7)(iii)(B)]

(8) 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/vapor 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. [§63.1363(g)(8)]

(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section. [§63.1363(g)(9)]

(10) Records of Inspections. The permittee shall keep records specified in §63.1367(f)(1) through (6). [§63.1367(f)]
(i) 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 §63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(1)]
(ii) 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 §63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(2)]
(iii) 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 §63.1367(f)(3)(i) or (ii). [§63.1367(f)(3)]
(A) Hourly records of whether the flow indicator specified under §63.1362(j)(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. [§63.1367(f)(3)(i)]
(iv) For each inspection conducted in accordance with §63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1367(f)(4)(i) through (ix). [§63.1367(f)(4)]

(A) Identification of the leaking equipment. [§63.1367(f)(4)(i)]
(B) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1366(h)(3); or a record of that the leak was detected by sensory observations. [§63.1367(f)(4)(ii)]
(C) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1367(f)(4)(iii)]
(D) Maximum instrument reading measured by the method specified in §63.1366(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1367(f)(4)(iv)]
(E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1367(f)(4)(v)]
(F) The name, initials, or other form of identification of the permittee (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1367(f)(4)(vi)]
(G) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1367(f)(4)(viii)]
(H) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1367(f)(4)(viii)]
(I) The date of successful repair of the leak. [§63.1367(f)(4)(ix)]

(v) For each inspection conducted in accordance with §63.1366(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. [§63.1367(f)(5)]

(vi) For each visual inspection conducted in accordance with §63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1367(f)(6)]

Reporting:

(a) Reporting Requirements. [§63.1363(h)]

(1) The permittee of a source subject to this section shall submit the reports listed in §63.1363(h)(1)(i). [§63.1363(h)(1)]
(i) Periodic reports described in §63.1363(h)(3). [§63.1363(h)(1)(ii)]

(2) Periodic reports. The permittee of a source subject to this section shall submit Periodic reports. [§63.1363(h)(3)]
(i) A report containing the information in §63.1363(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [§63.1363(h)(3)(i)]
(ii) For equipment complying with the provisions of §63.1363(b) through (g), the Periodic report shall contain the summary information listed in §63.1363(h)(3)(ii)(A) through (L) for each monitoring period during the 6-month period. [§63.1363(h)(3)(ii)]
(A) The number of valves for which leaks were detected as described in §63.1363(e)(2), the percent leakers, and the total number of valves monitored; [§63.1363(h)(3)(ii)(A)]

(B) The number of valves for which leaks were not repaired as required in §63.1363(e)(7), identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(B)]
(C) The number of pumps and agitators for which leaks were detected as described in §63.1363(c)(2), the percent leakers, and the total number of pumps and agitators monitored; [§63.1363(h)(3)(ii)(C)]
(D) The number of pumps and agitators for which leaks were not repaired as required in §63.1363(c)(3); [§63.1363(h)(3)(ii)(D)]
(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part; [§63.1363(h)(3)(ii)(E)]
(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part; [§63.1363(h)(3)(ii)(F)]
(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; [§63.1363(h)(3)(ii)(G)]
(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(H)]
(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1363(h)(3)(ii)(I)]
(J) The results of all monitoring to show compliance with §§63.164(i) and 63.165(a) of subpart H of this part conducted within the semiannual reporting period. [§63.1363(h)(3)(ii)(J)]
(K) If applicable, the initiation of a monthly monitoring program under either §63.1363(c)(4)(ii) or §63.1363(e)(4)(i)(A). [§63.1363(h)(3)(ii)(K)]
(L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of subpart H of this part. [§63.1363(h)(3)(ii)(L)]

(iii) For permittees electing to meet the requirements of §63.178(b) of subpart H of this part, the Periodic report shall include the information listed in §63.1363(h)(3)(iii) (A) through (E) for each process. [§63.1363(h)(3)(iii)]
(A) Product process equipment train identification; [§63.1363(h)(3)(iii)(A)]
(B) The number of pressure tests conducted; [§63.1363(h)(3)(iii)(B)]
(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1363(h)(3)(iii)(C)]
(D) The facts that explain any delay of repairs; and [§63.1363(h)(3)(iii)(D)]
(E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of this part. [§63.1363(h)(3)(iii)(E)]

(iv) Any change in the information submitted under §63.1363(h)(2) shall be provided in the next Periodic report. [§63.1363(h)(3)(iv)]

PERMIT CONDITION (EU0090, EU0093 through EU0098, EU0100, and EU0102 through EU0104)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Process vents subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall reduce the uncontrolled organic HAP emissions from a process vent by 98 percent by weight or greater. [§63.1362(b)(2)(ii)(A)]
(b) HCl and Cl_2 emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater. [§63.1362(b)(3)(ii)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION (EU0087, EU0088, and EU0099)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Storage Vessels subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall either determine the group status of a storage vessel or designate it as a Group 1 storage vessel. If the permittee elects to designate the storage vessel as a Group 1 storage vessel, the permittee is not required to determine the maximum true vapor pressure of the material stored in the storage vessel. [§63.1362(c)(1)]
(b) Except as specified in §63.1362(c)(5), the permittee of a Group 1 storage vessel at an existing affected source, as defined in §63.1361, shall equip the affected storage vessel with the following: [§63.1362(c)(2)]
  (1) A closed vent system meeting the conditions of §63.1362(j) and a control device that meets the following condition: [§63.1362(c)(2)(iv)]
    (i) Reduces organic HAP emissions by 95 percent by weight or greater;[§63.1362(c)(2)(iv)(A)]
(c) The permittee is exempt from the specifications in §63.1362(c)(2) through (4) during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage vessel between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. [§63.1362(c)(5)]
(d) Compliance with the provisions of §63.1362(c)(2) is demonstrated using the initial compliance procedures in §63.1365(d) and the monitoring requirements in §63.1366.. [§63.1362(c)(7)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION (EU0091, EU0092, EU0105, and EU0106)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Wastewater and Wastewater Tanks subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

Wastewater and wastewater tanks

(a) The permittee of each affected source shall comply with the requirements of §§63.132 through 63.147. [§63.1362(d)]

(1) The permittee shall comply with the requirements in §63.132(a)(2), no later than December 23, 2003.[§63.132(a) and §63.1362(d)(11)]

(i) For wastewater streams that are Group 1 for Table 9 compounds, comply with §63.132(a)(2)(i). .[§63.132(a)(2)]

(A) Comply with the applicable requirements for wastewater tanks as specified in §63.133 through §63.137 of this subpart, except as provided in paragraphs §63.132(a)(2)(i)(A) and (a)(2)(i)(B). .[§63.132(a)(2)(i)]

(1) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions. .[§63.132(a)(2)(i)(A)]

(2) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices. .[§63.132(a)(2)(i)(B)]

(2) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the permittee shall comply with the requirements of either §63.133(a)(1) or (a)(2) as specified in table 10 of this subpart.[§63.133(a)] Note: Table 10 is presented in the Statement of Basis

(i) The permittee shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged, the permittee shall comply with the requirements specified in §63.133(a)(2). .[§63.133(a)(1)]

(ii) The permittee shall comply with the requirements in §63.133(b), (g) and (h) and shall operate and maintain the emission control technique listed in §63.133(a)(2)(i). [§63.133(a)(2)]

(A) A fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device. [§63.133(a)(2)(i)]

(3) If the permittee elects to comply with the requirements of §63.133(a)(2)(i), the fixed roof shall meet the requirements of §63.133(b)(1).[§63.133(b)]

(i) The fixed-roof shall meet the following requirements: .[§63.133(b)(1)]

(A) 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 §63.1366(h), §63.1367(f), and §63.1368(g)(2)(iii) and (ix) of this subpart. [§63.133(b)(1)(i) and §63.1362(d)(16)]

(B) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. [§63.133(b)(1)(ii)]

(4) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.139 of this subpart. .[§63.133(b)(2)]

(5) Except as provided in §63.133(b)(4), the closed-vent system shall be inspected in accordance with the requirements of §63.148 of this subpart. .[§63.133(b)(3)]

(6) Each wastewater tank shall be inspected for control equipment failures as defined in§63.133(g)(1) according to the schedule in §63.133(g)(2) and (g)(3). .[§63.133(g)]

(i) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in §63.133(g)(1)(ix). .[§63.133(g)(1)]

(A) A gasket, joint, lid, cover, or door has a crack or gap, or is broken. [§63.133(g)(1)(ix)]

(ii) The permittee shall inspect for the control equipment failures in §63.133(g)(1)(ix) initially, and semi-annually thereafter. .[§63.133(g)(3)]

(7) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 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 this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the permittee may utilize up to 2 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 vessel will be emptied as soon as practical. [§63.133(h)]

(8) The permittee shall treat the wastewater stream or residual in a unit identified in, and complying with, §63.138(h)(1). These units are exempt from the design evaluation or performance tests requirements specified in §63.138(a)(3) and §63.138(j) of this subpart, and from the monitoring requirements specified in §63.132(a)(2)(iii) and §63.132(b)(3)(iii) of this subpart, as well as recordkeeping and reporting requirements associated with monitoring and performance tests. [§63.138(h)]

(i) The wastewater stream 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; .[§63.138(h)(1)]

(9) *Residuals.* For each residual removed from a Group 1 wastewater stream, the permittee shall control for air emissions by complying with §§63.133–137 of this subpart and by complying with §63.138(k)(4). .[§63.138(k)]

(i) Comply with the requirements for RCRA treatment options specified in §63.138(h) of this subpart. .[§63.138(k)(4)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PROWL Production Plant and Sulfuric Acid Regeneration (SAR) Plant			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0108	PR-01	o-Xylene Storage Tank (process #110-002); 1,567,000 gallon capacity; installed 1975-76	vent condenser (process #631-021)
EU0109	PR-22	Reductive Alkyl Separator (process #150-011) & Filtration Hold Tank Vent (process #150-100);& Vent from Purge Catalyst Filter (process #150-009 was PR-26)	vent condenser (process #150-104)
EU0110	PR-47, PR-53, or PR-54	Nitration Seal Pot (process #003-055)	RCRA Incinerators
EU0111	PR-51	SAR Furnace (process #220-K31); 1997; Natural Gas Fired	None
EU0112	PR-52	SAR Combustion Air Preheater (process #220-X41); 1989; Natural Gas Fired	None
EU0113	PR-47, PR-53, or PR-54	Ethylene Dichloride Storage Tank (process #170-042); 30,300 gallon capacity; 1995	RCRA Incinerators
EU0114	PR-56	Prowl process bldg vent (process fugitives)	None
EU0115	PR-47, PR-53, or PR-54	Separation I Distillation Seal Pot (process #140-012)	RCRA Incinerators

PERMIT CONDITION (EU0110, EU0113 through EU0115)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM. The individual requirements for each type of equipment are detailed in following Permit Conditions.

General Conditions

Emission Limitations/Operating Limitations

a) On and after December 23, 2003, the permittee of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in §63.1363, as summarized in Table 2 to Subpart MMM of Part 63. [§63.1362(a)]

b) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions regarding construction and reconstruction in §63.5 of subpart A of this part. [§63.1367(a)(5)]

c) Opening of a safety device. Opening of a safety device, as defined in §63.1361, is allowed at any time conditions require it to avoid unsafe conditions. [§63.1362(i)]

d) Closed-vent systems. The permittee of a 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 §63.1362(b) through (d) shall comply with the requirements of Table 3 of this subpart and paragraph §63.1362(j)(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. [§63.1362(j)]

   (1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in §63.1367(f)(1). 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 [§63.1362(j)(1)]

   (2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in §63.1367(f)(2). [§63.1362(j)(2)]

Recordkeeping:

(a) The permittee shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in §63.1367(a)(1) through (5). [§63.1367(a)]
   (1) The permittee of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part. [§63.1367(a)(1)]

Reporting:

(a) The permittee shall comply with the reporting requirements of §63.1368(b) through (l). The permittee shall also comply with applicable paragraphs of §§63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart. [§63.1368(a)]
(b) The permittee who is subject to §63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to these standards. The application shall be prepared in accordance with §63.5(d) of subpart A of this part. [§63.1368(c)]

Startup, Shutdown, Malfunction:

SSM Plan:

The permittee shall develop a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The permittee of an affected source shall keep the current and superseded versions of this plan onsite, as specified in §63.6(e)(3)(v) of subpart A of this part. The permittee shall keep the startup, shutdown, and malfunction records specified in paragraphs §63.1367(a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in §63.1368(i). [§63.1367(a)(3)]

(i) The permittee shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with subpart MMM of this part, as specified in §63.6(e)(3)(iii). [§63.1367(a)(3)(i)]
(ii) The permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subpart MMM of this part. [§63.1367(a)(3)(ii)]
(iii) For each startup, shutdown, or malfunction, the permittee shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in §63.6(e)(3)(iii) of subpart A of this part; alternatively, the permittee shall record any actions taken that are not consistent with the plan, as specified in §63.6(e)(3)(iv) of subpart A of this part. [§63.1367(a)(3)(iii)]

Reporting:

For the purposes of subpart MMM of this part, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under §63.1368(g) instead of the schedule specified in §63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in §63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the permittee or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time the permittee takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee shall submit an immediate startup,

shutdown, and malfunction report as specified in §63.10(d)(5)(ii) of subpart A of this part. [§63.1368(i)]

PERMIT CONDITION (EU0110, EU0113 through EU0115)-002
10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM.

Standards for Equipment Leaks:

Emission Limitation/Monitoring-General Equipment Leaks:

(a) General equipment leak requirements. [§63.1363(a)]
- (1) The provisions of this section apply to "equipment" as defined in §63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section. [§63.1363(a)(1)]
- (2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: [§63.1363(a)(2)]
  - (i) 40 CFR Part 60. [§63.1363(a)(2)(i)]
  - (ii) 40 CFR Part 61. [§63.1363(a)(2)(ii)]
- (3) The provisions in §63.1(a)(3) of subpart A of this part do not alter the provisions in §63.1363(a)(2). [§63.1363(a)(4)]
- (4) Lines and equipment not containing process fluids are not subject to the provisions of §63.1363. 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. [§63.1363(a)(5)]
- (5) The provisions of §63.1363 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 this subpart MMM. [§63.1363(a)(6)]
- (6) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. 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 15 calendar days of the end of each monitoring period for that component. [§63.1363(a)(7)]
- (7) Equipment that is in vacuum service is excluded from the requirements of this section. [§63.1363(a)(8)]
- (8) 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 this section if it is identified as required in §63.1363(g)(9). [§63.1363(a)(9)]
- (9) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c) of subpart H of this part, the following requirements apply: [§63.1363(a)(10)]
  - (i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1363(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 §63.1363(e)(7)(iii), and no leak has been detected

during the follow-up monitoring. If the permittee elects to comply with §63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring. [§63.1363(a)(10)(ii)]

(iii) The identification on equipment, except as specified in §63.1363(a)(10)(ii), may be removed after it has been repaired. [§63.1363(a)(10)(iii)]

(b) The permittee shall comply with the provisions of subpart H of this part as presented below. When the term "process unit" is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes. [§63.1363(b)]

Standards: Compressors.

(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 §63.1363(a) of this subpart 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)]

(i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]

(ii) 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 §63.1362; or [§63.164(b)(2)]

(iii)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)]

(5) Seal systems [§63.164(e)]

(i) 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)]

(ii) 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)]

(6) 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)]

(7) Leak repair [§63.164(g)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.164(g)(1)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.164(g)(2)]

(8) 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 §63.1362 of this subpart. [§63.164(h)]

(9) Any compressor that is designated, as described in §63.1363(g), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i) and §63.1363(b)(1)(vii)]

(i) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and [§63.164(i)(1)]
(ii) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Administrator. [§63.164(i)(2)]

Standards: 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 parts per million above background except as provided in §63.165(b), as measured by the method specified in §63.180(c) of this subpart. [§63.165(a)]
(2) Pressure releases [§63.165(b)]
(i) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(b)(1)]
(ii) No later than 5 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 parts per million above background, as measured by the method specified in §63.180(c) of this subpart. [§63.165(b)(2)]
(3) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.1362 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]
(4) Rupture disks [§63.165(d)]
(i) 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)]
(ii) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(d)(2)]

Standards: 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 §63.1363(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a) and §63.1363(b)(1)(i)]
(2) Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]
(i) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]
(ii) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]
(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.1362; or [§63.166(b)(3)]
(iv) 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)]
(A) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the

purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]

(C) 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: 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 5 calendar days by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), 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), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.169(a)]

(2) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]

(3) Leaks [§63.169(c)]

(i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.169(c)(1)]

(ii) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.169(c)(2)]

(iii) 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)]

(4) First attempts at repair include, but are not limited to, the practices described under §§63.1363(c) and 63.1363(e) of this subpart, for pumps and valves, respectively. [§63.169(d), §63.1363(b)(1)(iii), and §63.1363(b)(1)(v)]

Standards: Delay of repair.

(1) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist: [§63.1363(b)(3)(i)]

(i) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1363(b)(3)(i)(A)]

(ii) 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. [§63.1363(b)(3)(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)]

(i) 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)]

(ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.1362. [§63.171(c)(2)]

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [§63.171(e)]

Standards: Closed-vent systems and control devices.

(1) Permittees of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]

(2) 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)]

(i) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]

(ii) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]

(A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172 (f)(2)(i)]

(B) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]

(3) Each closed-vent system shall be inspected according to the procedures in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.172(g)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i) of this section. [§63.172(h)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.172(h)(1)]

(ii) 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)]

(5) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the 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 process unit shutdown. [§63.172(i)]

(6) 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)]
   (i) 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) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]
   (ii) 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)]
   (iii) 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)]

(7) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. [§63.172(m)]

(8) After the compliance dates specified in §63.100 of subpart F of this part, the permittee of any control device subject to this subpart 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 this subpart, 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 this subpart. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1363(h). [§63.172(n)]

Standards: Connectors in gas/vapor service and in light liquid service.

(1) The permittee of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1363(a) and §63.1363(f) of this subpart , at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(a) and §63.1363(b)(1)(i)]
   (i) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v). [§63.174(a)(1)]
   (ii) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. [§63.174(a)(2)]

(2) The permittee shall monitor for leaks at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(b) and §63.1363(b)(3)(iii)(A)]
   (i) 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. [§63.1363(b)(3)(iii)(C)]
   (ii) 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 last required monitoring period, monitoring shall be performed once every 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the

first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period. [§63.1363(b)(3)(iii)(D)]

(iii) The permittee shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in §63.1363(b)(3)(iii)(D), the first 4 years specified in §63.1363(b)(3)(iii)(G), or the entire 8 years specified in §63.1363(b)(3)(iii)(G). At the end of that 2-year monitoring period, the permittee shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the permittee may again elect to monitor in accordance with §63.1363(b)(3)(iii)(D) or (G), as applicable. [§63.1363(b)(3)(iii)(E)]

(iv) If the permittee complying with the requirements of §63.1363(b)(3)(iii)(D) or (G) for a group of processes determines that 1 percent or greater of the connectors are leaking, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of §63.1363(b)(3)(iii)(D) or (G) after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking. [§63.1363(b)(3)(iii)(F)]

(v) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 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 §63.1363(b)(3)(iii)(D), (E), or (F). [§63.1363(b)(3)(iii)(G)]

(3) Connectors

(i) Open connectors

(A) 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 3 months after being returned to organic hazardous air pollutants 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)]

(B) As an alternative to the requirements in §63.174(c)(1)(i), a 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 §63.1363(b)(3)(iii)(C) through (G), 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)]

(C) A permittee may switch alternatives described in §63.174(c)(1) (i) and (ii) at the end of the current monitoring period he is in, provided that it is reported as required in §63.1363(h) of this subpart 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) and §63.1363(b)(1)(viii)]

(ii) As an alternative to the requirements of §63.1363(b)(3)(iii)(C) through (G), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in §63.174(c)(2)(iv) may: [§63.174(c)(2)]

(A) Comply with the requirements of §63.169 of this subpart, and [§63.174(c)(2)(i)]

(B) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d). [§63.174(c)(2)(ii)]

(C) The provisions of §63.174(c)(2) apply to screwed connectors installed before November 10, 1997. [§63.174(c)(2)(iv)]

(4) 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 §63.1363(f) and in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [§63.174(d)]

(5) For use in determining the monitoring frequency, as specified in §63.1363(b)(3)(iii)(C) through (G), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]

(i) For the first monitoring period, use the following equation: [§63.174(i)(1)]

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

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

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

C_C = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then C_C = 0.

(ii) For subsequent monitoring periods, use the following equation: [§63.174(i)(2)]

$$\%C_L = \left[\frac{(C_L - C_{AN})}{(C_t + C_c)}\right] \times 100$$

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1363(b)(3)(iii)(C) through (G) and §63.174 (c), not to exceed 2 percent of the total connector population, C_t.

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

C_C = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(6) Optional credit for removed connectors. If a permittee eliminates a connector subject to monitoring under §63.1363(b)(3)(iii)(C) through (G), 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). [§63.174(j)]

(i) The connector was welded after November 10, 1997. [§63.174(j)(1)]

(ii) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]

(iii) Welds created after November 10, 1997 but before June 23, 1999 are monitored or tested by 3 months after December 23, 2003. [§63.174(j)(3)]

(iv) Welds created after June 23, 1999 are monitored or tested within 3 months after being welded. [§63.174(j)(4)]

(v) 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 this subpart. [§63.174(j)(5)]

Alternative means of emission limitation: Batch processes.

(1) As an alternative to complying with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b), § 63.171, and §63.174, the permittee of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in §63.178(b) and (c), with the differences specified in §63.1363(b)(3)(iv), or the permittee may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The permittee may switch among the alternatives provided the change is documented as specified in §63.1363(g). [§63.178(a)]

(2) The following requirements shall be met if a permittee elects to use pressure testing of process equipment to demonstrate compliance with this subpart. A permittee who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.1363(c), §63.1363(e), and §63.169 of this subpart. [§63.178(b)]

(i) Each time equipment is reconfigured for production of a different product or intermediate, the process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service. [§63.178(b)(1)]

(A) When the process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment. [§63.178(b)(1)(i)]

(B) Each process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year. [§63.178(b)(1)(ii)]

(C) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate. [§63.178(b)(1)(iii)]

(ii) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart. [§63.178(b)(2)]

(iii) Pressure tests

(A) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss. [§63.178(b)(3)(i)]

(B) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss. [§63.178(b)(3)(ii)]

(iv) Leaks

(A) If a leak is detected, it shall be repaired and the process equipment shall be retested before start-up of the process. [§63.178(b)(4)(i)]

(B) If a process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in §63.178(d) are met. [§63.178(b)(4)(ii)]

(3) The following requirements shall be met if a permittee elects to monitor the equipment to detect leaks by the method specified in §63.180(b), with the differences specified in §63.180(b)(3)(v), of this subpart to demonstrate compliance with this subpart. [§63.178(c)]

(i) The permittee shall comply with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b),, and §§63.172 through 63.174 of this subpart. [§63.178(c)(1)]

(ii) The equipment shall be monitored for leaks by the method specified in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.178(c)(2)]

(iii) The equipment shall be monitored for leaks as specified below: [§63.178(c)(3)]

(A) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit. [§63.178(c)(3)(i)]

(B) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart. [§63.178(c)(3)(ii)]

(C) Equipment other than connectors shall be monitored quarterly. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating. [§63.178(c)(3)(iii) and §63.1363(b)(3)(iv)(B)]

(D) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. A permittee may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating. [§63.178(c)(3)(iv)]

(iv) If 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 §63.178(d). [§63.178(c)(4)]

(4) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met: [§63.178(d)]

(i) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted. [§63.178(d)(1)]

(ii) The repair is made no later than 10 calendar days after delivery of the replacement equipment. [§63.178(d)(2)]

(c) Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1363(c)]

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service. [§63.1363(c)(1)]

(2) Monitoring [§63.1363(c)(2)]

(i) Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in §63.180(b), except as provided in §63.1363(f), and §63.1363(c)(5) through (9). [§63.1363(c)(2)(i)]

(ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b) of subpart H of this part, that defines a leak is: [§63.1363(c)(2)(ii)]

(A) For agitators, an instrument reading of 10,000 parts per million or greater. [§63.1363(c)(2)(ii)(A)]

(B) For pumps, an instrument reading of 2,000 parts per million or greater. [§63.1363(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 seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1363(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1363(c)(2)(iii)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(2)(iii)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(2)(iii)(B)]

(3) Repair provisions. [§63.1363(c)(3)]

(i) When a leak is detected pursuant to §63.1363(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 §63.1363(b)(3)(i). [§63.1363(c)(3)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(c)(3)(ii)]

(A) Tightening of packing gland nuts. [§63.1363(c)(3)(ii)(A)]

(B) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1363(c)(3)(ii)(B)]

(4) Calculation of percent leakers. [§63.1363(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. [§63.1363(c)(4)(i)]

(ii) If, calculated on a 1–year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the permittee shall monitor each pump once per month, until the calculated 1–year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps). [§63.1363(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 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1363(c)(4)(iii)]

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart: [§63.1363(c)(4)(iv)]

$$\% \ P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)} \right] \times 100$$

Where: $\% \ P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in §63.1363(c)(2)(i) and (ii)

P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1363(c)(5) and (6).

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in §63.1363(c)(5)(i) through (vii) is exempt from the requirements of §63.1363(c)(1) through (c)(4)(iii), except as specified in §63.1363(c)(5)(iv)(A) and (vii). [§63.1363(c)(5)]

(i) Each dual mechanical seal system is: [§63.1363(c)(5)(i)]

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1363(c)(5)(i)(A)]

(B) 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 §63.1363(b)(3)(ii); or [§63.1363(c)(5)(i)(B)]

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1363(c)(5)(i)(C)]

(ii) The barrier fluid is not in light liquid service. [§63.1363(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. [§63.1363(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 §63.1363(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1363(c)(5)(iv)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(5)(iv)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(5)(iv)(B)]

(v) Each sensor as described in §63.1363(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. [§63.1363(c)(5)(v)]

(vi) Drips [§63.1363(c)(5)(vi)]

(A) 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. [§63.1363(c)(5)(vi)(A)]

(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1363(c)(5)(vi)(A), or if, based on the criteria established in §63.1363(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1363(c)(5)(vi)(B)]

(vii) When a leak is detected pursuant to §63.1363(c)(5)(iv)(A) or (vi)(B), the leak must be repaired as specified in §63.1363(c)(3). [§63.1363(c)(5)(vii)]

(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1363(c)(1) through (3). [§63.1363(c)(6)]

(7) 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 §63.1363(b)(3)(ii) is exempt from the requirements of §63.1363(c)(2) through (5). [§63.1363(c)(7)]

(8) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1363(c)(5) or (6), the group of processes is exempt from the requirements of §63.1363(c)(4). [§63.1363(c)(9)]

(d) Standards: open-ended valves or lines. [§63.1363(d)]

(1)Open ended valves or lines [§63.1363(d)(1)]

(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.1363(d)(4) through (6). [§63.1363(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 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. [§63.1363(d)(1)(ii)]

(2) 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. [§63.1363(d)(2)]

(3) 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 §63.1363(d)(1) at all other times. [§63.1363(d)(3)]

(4) 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 §63.1363(d)(1) through (3). [§63.1363(d)(4)]

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(5)]

(6) 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 §63.1363(d)(1) through (3) are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(6)]

(e) Standards: valves in gas/vapor service and in light liquid service. [§63.1363(e)]

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. [§63.1363(e)(1)]

(2) For existing affected sources, all valves subject to this section shall be monitored, except as provided in §63.1363(f) by no later than 1 year after December 23, 2003. [§63.1363(e)(2)]

(3) Monitoring. The permittee of a source subject to this section shall monitor all valves, except as provided in §63.1363(f), at the intervals specified in §63.1363(e)(4) and shall comply with all other provisions of this section, except as provided in §63.1363(b)(3)(i). [§63.1363(e)(3)]

(i) The valves shall be monitored to detect leaks by the method specified in §63.180(b) of subpart H of this part. [§63.1363(e)(3)(i)]

(ii) An instrument reading of 500 parts per million or greater defines a leak. [§63.1363(e)(3)(ii)]

(4) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1363(e)(2) the permittee shall monitor valves for leaks at the intervals specified below: [§63.1363(e)(4)]

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to §63.1363(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1363(e)(9). [§63.1363(e)(4)(i)]

(ii) For a group of processes with less than 2 percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1363(e)(4)(iii) through (v). [§63.1363(e)(4)(ii)]

(iii) For a group of processes with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters. [§63.1363(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 4 quarters. [§63.1363(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 2 years. [§63.1363(e)(4)(v)]

(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1363(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1363(e)(5)(i) through (viii) apply. [§63.1363(e)(5)]

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to §63.1363(e)(3)(i) and (ii) and as calculated according to §63.1363(e)(6)(ii) and (iii). [§63.1363(e)(5)(i)]

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1363(e)(5)(ii) (A) through (C). [§63.1363(e)(5)(ii)]

(A) The permittee shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained. [§63.1363(e)(5)(ii)(A)]

(B) 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 must be included with the

less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1363(e)(5)(ii)(B)]

(C) 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. [§63.1363(e)(5)(ii)(C)]

(iii) The permittee shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 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 2 percent leaking valves or greater, the permittee shall revert to the program required in §63.1363(e)(2) through (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 Equation 4 of this subpart: [§63.1363(e)(5)(iii)]

$$\% \ V_{LO} = \frac{\sum_{i=1}^{n}\left(\% \ V_{Li} \times V_i\right)}{\sum_{i=1}^{n} V_i}$$

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

$\% \ V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1363(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i

n = number of subgroups

(iv) Records. In addition to records required by §63.1363(g), the permittee shall maintain records specified in §63.1363(e)(5)(iv)(A) through (D). [§63.1363(e)(5)(iv)]

(A) Which valves are assigned to each subgroup, [§63.1363(e)(5)(iv)(A)]

(B) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1363(e)(5)(iv)(B)]

(C) Which valves are reassigned and when they were reassigned, and [§63.1363(e)(5)(iv)(C)]

(D) The results of the semiannual overall performance calculation required in §63.1363(e)(5)(iii). [§63.1363(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. [§63.1363(e)(5)(v)]

(vi) Semiannual reports. In addition to the information required by §63.1363(h)(3), the permittee shall submit in the Periodic reports the information specified in §63.1363(e)(5)(vi) (A) and (B). [§63.1363(e)(5)(vi)]

(A) Valve reassignments occurring during the reporting period, and [§63.1363(e)(5)(vi)(A)]

(B) Results of the semiannual overall performance calculation required by §63.1363(e)(5)(iii). [§63.1363(e)(5)(vi)(B)]

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1363(e)(6)(iii) shall be used. [§63.1363(e)(5)(vii)]

(viii) Except for the overall performance calculations required by §63.1363(e)(5)(i) and (iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section. [§63.1363(e)(5)(viii)]

(6) Percentage Calculations [§63.1363(e)(6)]

(i) The permittee shall decide no later than the implementation date of this subpart 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. [§63.1363(e)(6)(i)]

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: [§63.1363(e)(6)(ii)]

$$\% \ V_L = \left[\frac{V_L}{V_T}\right] \times 100$$

Where: $\% \ V_L$ = percent leaking valves

V_L = number of valves found leaking excluding nonrepairables as provided in §63.1363(e)(6)(iv)(A)

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1363(e)(7)(iii)

(iii) 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 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1363(e)(6)(iii)]

(iv) Nonrepairable valves [§63.1363(e)(6)(iv)]

(A) 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 §63.1363(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 1 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. [§63.1363(e)(6)(iv)(A)]

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1363(e)(6)(iv)(B)]

(7) Repair provisions. [§63.1363(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 §63.1363(b)(3)(i). [§63.1363(e)(7)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.1363(e)(7)(ii)]

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be

considered part of this 3-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." [§63.1363(e)(7)(iii)]

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking. [§63.1363(e)(7)(iii)(A)]

(B) Periodic monitoring required by §63.1363(e)(2) through (4) may be used to satisfy the requirements of §63.1363(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1363(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1363(e)(7)(iii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1363(e)(7)(iii). [§63.1363(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to §63.1363(e)(7)(iii), the permittee shall follow the provisions of §63.1363(e)(7)(iii)(C)(*1*) and (*2*) to determine whether that valve must be counted as a leaking valve for purposes of §63.1363(e)(6). [§63.1363(e)(7)(iii)(C)]

(*1*) If the permittee elects to use periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1363(e)(7)(iii)(C)(1)]

(*2*) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(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. [§63.1363(e)(7)(iii)(C)(2)]

(8) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(e)(8)]

(i) Tightening of bonnet bolts, [§63.1363(e)(8)(i)]

(ii) Replacement of bonnet bolts, [§63.1363(e)(8)(ii)]

(iii) Tightening of packing gland nuts, and [§63.1363(e)(8)(iii)]

(iv) Injection of lubricant into lubricated packing. [§63.1363(e)(8)(iv)]

(9) 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 §63.1363(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1363(e)(4)(iii), (iv), or (v), except as provided in §63.1363(f). [§63.1363(e)(9)]

(f) Unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [§63.1363(f)]

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in §63.1363(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1363(f)(2), (3), or (4), as applicable. All equipment, except connectors that meet the requirements in §63.1363(f)(4), must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1363(f)(1)]

(i) For pumps and agitators, §63.1363(c)(2), (3), and (4) do not apply. [§63.1363(f)(1)(i)]

(ii) For valves, §63.1363(e)(2) through (7) do not apply. [§63.1363(f)(1)(ii)]

(iii) For connectors, §63.174(b) through (e) and §63.1363(b)(3)(iii)(C) through (G) do not apply. [§63.1363(f)(1)(iii)]

(iv) For closed-vent systems, §63.172(f)(1), (f)(2), and (g) do not apply. [§63.1363(f)(1)(iv)]

(2) Equipment that is unsafe-to-monitor. [§63.1363(f)(2)]

(i) Valves, connectors, agitators, and any part of closed-vent systems 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 identified in §63.1363(f)(1)(i) through (iii), or the inspection requirements identified in §63.1363(f)(1)(iv). [§63.1363(f)(2)(i)]

(ii) The permittee of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed vent systems, inspections shall not be more frequent than annually. [§63.1363(f)(2)(ii)]

(3) Equipment that is difficult-to-monitor. [§63.1363(f)(3)]

(i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the permittee determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service; [§63.1363(f)(3)(i)]

(ii) The permittee of valves, agitators, or pumps designated as difficult-to-monitor must 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-monitor, the permittee must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [§63.1363(f)(3)(iii)]

(4) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1363(f)(4)]

(i) A connector may be designated as inaccessible if it is: [§63.1363(f)(4)(i)]

(A) Buried; [§63.1363(f)(4)(i)(A)]

(B) Insulated in a manner that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(B)]

(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(C)]

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or [§63.1363(f)(4)(i)(D)]

(E) 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. [§63.1363(f)(4)(i)(E)]

(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [§63.1363(f)(4)(i)(F)]

(ii) 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 §63.1363(b)(3)(i). [§63.1363(f)(4)(iii)]

(iii) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1363(g) and (h). [§63.1363(f)(4)(iv)]

Emission Limitation/Monitoring-Vapor Suppression Equipment [§63.1366(h)]:

(a) Leak inspection provisions for vapor suppression equipment. [§63.1366(h)]

(1) Except as provided in §63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the permittee shall comply with the requirements of §63.1366(h)(2) through (8). [§63.1366(h)(1)]

(2) Except as provided in §63.1366(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(i) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(iii). [§63.1366(h)(2)]

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1366(h)(2)(i)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(i)(A)]

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(i)(B)]

(ii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1366(h)(2)(iii)]

(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(iii)(A)]

(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(iii)(B)]

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1366(h)(3)(i) through (vi). [§63.1366(h)(3)]

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, appendix A. [§63.1366(h)(3)(i)]

(ii) Detection instrument performance criteria. [§63.1366(h)(3)(ii)]

(A) Except as provided in §63.1366(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the 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. [§63.1366(h)(3)(ii)(A)]

(B) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1366(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 §63.1366(h)(3)(ii)(A). [§63.1366(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 40 CFR Part 60, appendix A. [§63.1366(h)(3)(iii)]

(iv) Calibration gases shall be as follows: [§63.1366(h)(3)(iv)]

(A) Zero air (less than 10 parts per million hydrocarbon in air); and [§63.1366(h)(3)(iv)(A)]

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. 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 §63.1366(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. [§63.1366(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. [§63.1366(h)(3)(v)]

(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance. [§63.1366(h)(3)(vi)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1366(h)(5). [§63.1366(h)(4)]

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.1366(h)(4)(i)]

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected. [§63.1366(h)(4)(ii)]

(5) 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 §63.1361, 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. [§63.1366(h)(5)]

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii) if: [§63.1366(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 §63.1366(h)(2)(i), (ii), or (iii); and [§63.1366(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. Inspection is not required more than once annually. [§63.1366(h)(6)(ii)]

(7) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii)(A) if: [§63.1366(h)(7)]

(i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [§63.1366(h)(7)(i)]

(ii) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. [§63.1366(h)(7)(ii)]

(8) Records shall be maintained as specified in §63.1367(f). [§63.1366(h)(8)]

(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of §63.1363, the permittee shall comply with the provisions of §63.1363 and is exempt from the requirements of this section. [§63.1366(h)(9)]

Test Methods:

(a) Each permittee subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [§63.180(a)]

(b) Monitoring, as required under this subpart, shall comply with the following requirements: [§63.180(b)]

(1) Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(1)]

(2) Detection instruments [§63.180(b)(2)]

(i) Except as provided for in §63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. [§63.180(b)(2)(i)]

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in §63.180(b)(2)(i), 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 §63.180(b)(2)(i). [§63.180(b)(2)(ii)]

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(3)]

(4) Calibration gases shall be: [§63.180(b)(4)]

(i) Zero air (less than 10 parts per million of hydrocarbon in air); and [§63.180(b)(4)(i)]

(ii) 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 §63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as specified in §63.180(b)(4)(iii) of subpart H. [§63.180(b)(4)(ii) and §63.1363(b)(3)(v)]

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. [§63.180(b)(4)(iii)]

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.180(b)(5)]

(6) Monitoring data that do not meet the criteria specified in §63.180(b)(1)through (b)(5) may be used to qualify for less frequent monitoring under the provisions in §63.1363(e) or §63.1363(b)(3)(iii)(C) through (G) provided the data meet the conditions specified in §63.180(b)(6)(ii). [§63.180(b)(6), §63.1363(b)(1)(v), and §63.1363(b)(3)(iii)(A)]

(i) The departures from the criteria specified in §63.180(b)(1) through (b)(5) or from the specified monitoring frequency of §63.1363(e) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly

different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of appendix A of 40 CFR Part 60 instead of §63.180(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure. [§63.180(b)(6)(ii) and §63.1363(b)(1)(v)]

(c) When equipment is monitored for compliance as required in §§63.164(i), and 63.165(a) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the permittee may elect to adjust or not to adjust the instrument readings for background. If a permittee elects to not adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(b)(1) through (b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If a permittee elects to adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(c)(1) through (c)(4). [§63.180(c)]

(1) The requirements of §63.180(b) (1) through (4) shall apply. [§63.180(c)(1)]

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking. [§63.180(c)(2)]

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR Part 60, appendix A. [§63.180(c)(3)]

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance. [§63.180(c)(4)]

(d) Organic HAP service [§63.180(d)]

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used. [§63.180(d)(1)]

(2) Other methods [§63.180(d)(2)]

(i) A permittee may use good engineering judgment rather than the procedures in §63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When a permittee and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in §63.180(d)(1) shall be used to resolve the disagreement. [§63.180(d)(2)(i)]

(ii) Conversely, the permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. [§63.180(d)(2)(ii)]

(3) If a permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in §63.180(d)(1), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service. [§63.180(d)(3)]

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment. [§63.180(d)(4)]

(e) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart. [§63.180(f)]

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum. [§63.180(f)(1)]

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off. [§63.180(f)(2)]

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation: [§63.180(f)(3)]

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta\frac{P}{t}$ =Change in pressure, psig/hr.

P_f=Final pressure, psig.

P_i=Initial pressure, psig.

$t_f - t_i$ =Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the permittee shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour. [§63.180(f)(4)]

(5) An alternative procedure may be used for leak testing the equipment if the permittee demonstrates the alternative procedure is capable of detecting a pressure loss or rise. [§63.180(f)(5)]

(f) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart. [§63.180(g)]

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off. [§63.180(g)(1)]

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure. [§63.180(g)(2)]

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected. [§63.180(g)(3)]

(4) An alternative procedure may be used for leak testing the equipment, if the permittee demonstrates the alternative procedure is capable of detecting losses of fluid. [§63.180(g)(4)]

Recordkeeping:

(a) Recordkeeping requirements. [§63.1363(g)]

(1) The permittee of more than one group of processes subject to the provisions of this section 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. [§63.1363(g)(1)]

(2) General recordkeeping. Except as provided in §63.1363(g)(5), the following information pertaining to all equipment subject to the requirements in this section shall be recorded: [§63.1363(g)(2)]

(i) Information required [§63.1363(g)(2)(i)]

(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to §63.1363(f), need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors 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 within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored. [§63.1363(g)(2)(i)(A)]

(B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of subpart H of this part and valves subject to the provisions of §63.1363(e)(4). [§63.1363(g)(2)(i)(B)]

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(2)(i)(C)]

(ii) Identification numbers [§63.1363(g)(2)(ii)]

(A) 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 §63.1363(c)(7) or §§63.164(h) or 63.165(c) of subpart H of this part. [§63.1363(g)(2)(ii)(A)]

(B) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.164(i) of subpart H of this part. [§63.1363(g)(2)(ii)(B)]

(iii)Identification numbers [§63.1363(g)(2)(iii)]

(A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of subpart H of this part. [§63.1363(g)(2)(iii)(A)]

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of subpart H of this part. [§63.1363(g)(2)(iii)(B)]

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified. [§63.1363(g)(2)(iv)]

(v) The following information shall be recorded for each dual mechanical seal system: [§63.1363(g)(2)(v)]
  (A) Design criteria required by §63.1363(c)(5)(vi)(A) and §63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and [§63.1363(g)(2)(v)(A)]
  (B) Any changes to these criteria and the reasons for the changes. [§63.1363(g)(2)(v)(B)]
(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under §63.1363(f) and a copy of the plan for monitoring this equipment. [§63.1363(g)(2)(vi)]
(vii) A list of connectors removed from and added to the process, as described in §63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used. [§63.1363(g)(2)(vii)]
(viii) For batch processes that the permittee elects to monitor as provided under §63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored. [§63.1363(g)(2)(viii)]

(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1363(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 §63.1363(g)(4) for leaking equipment identified in this inspection, except as provided in §63.1363(g)(5). These records shall be retained for 5 years. [§63.1363(g)(3)]

(4) Monitoring records. When each leak is detected as specified in §63.1363(c) and (e) and §§63.164, 63.169, and 63.174 of subpart H of this part, the permittee shall record the information specified in §63.1363(g)(4)(i) through (viii). All records shall be retained for 5 years, in accordance with the requirements of §63.10(b)(1) of subpart A of this part. [§63.1363(g)(4)]
(i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1363(g)(4)(i)]
(ii) The date the leak was detected and the date of first attempt to repair the leak. [§63.1363(g)(4)(ii)]
(iii) The date of successful repair of the leak. [§63.1363(g)(4)(iii)]
(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR Part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. [§63.1363(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. [§63.1363(g)(4)(v)]
  (A) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.1367(a), for the source or may be part of a separate 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. [§63.1363(g)(4)(v)(A)]
  (B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1363(g)(4)(v)(B)]

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1363(g)(4)(vi)]

(vii) Monitoring [§63.1363(g)(4)(vii)]

(A) If the alternative in §63.174(c)(1)(ii) of subpart H of this part 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) of subpart H of this part, as described in §63.174(c)(1) of subpart H of this part. [§63.1363(g)(4)(vii)(A)]

(B) The date and results of follow-up monitoring as required in §63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1363(g)(4)(vii)(B)]

(viii) The date and results of the monitoring required in §63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii)of subpart H of this part. 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. [§63.1363(g)(4)(viii)]

(ix) Copies of the periodic reports as specified in §63.1363(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1363(g)(4)(ix)]

(5) Records of pressure tests. The permittee who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of §63.1363(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1363(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. [§63.1363(g)(5)(i)]

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the permittee does not adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii) of subpart H of this part. [§63.1363(g)(5)(ii)]

(iii) 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 this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(5)(iii)]

(iv) The dates of each pressure test required in §63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. [§63.1363(g)(5)(iv)]

(v) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1363(g)(5)(v)]

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: [§63.1363(g)(5)(vi)]

(A) The date of each pressure test and the date of each leak repair attempt. [§63.1363(g)(5)(vi)(A)]

(B) Repair methods applied in each attempt to repair the leak. [§63.1363(g)(5)(vi)(B)]

(C) The reason for the delay of repair. [§63.1363(g)(5)(vi)(C)]

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1363(g)(5)(vi)(D)]
(E) The date of successful repair. [§63.1363(g)(5)(vi)(E)]

(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) of subpart H of this part 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) of subpart H of this part. The results shall include: [§63.1363(g)(6)]
(i) The background level measured during each compliance test. [§63.1363(g)(6)(i)]
(ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1363(g)(6)(ii)]

(7) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1363(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1363(b)(3)(ii). The records specified in §63.1363(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1363(g) (7)(ii) and (iii) shall be retained for 5 years. [§63.1363(g)(7)]
(i) The design specifications and performance demonstrations specified in §63.1363(g)(7)(i)(A) through (C). [§63.1363(g)(7)(i)]
(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1363(g)(7)(i)(A)]
(B) The dates and descriptions of any changes in the design specifications. [§63.1363(g)(7)(i)(B)]
(C) A description of the parameter or parameters monitored, as required in §63.1363(b)(3)(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. [§63.1363(g)(7)(i)(D)]
(ii) Records of operation of closed-vent systems and control devices. [§63.1363(g)(7)(ii)]
(A) Dates and durations when the closed-vent systems and control devices required in §63.1363(c) and §§63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters. [§63.1363(g)(7)(ii)(A)]
(B) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1363(g)(7)(ii)(B)]
(C) Dates and durations of startups and shutdowns of control devices required in §63.1363(c) of this section and §§63.164 through 63.166 of subpart H of this part. [§63.1363(g)(7)(ii)(C)]
(iii) Records of inspections of closed-vent systems subject to the provisions of §63.172 of subpart H of this part. [§63.1363(g)(7)(iii)]
(A) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (2) of subpart H of this part 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. [§63.1363(g)(7)(iii)(A)]
(B) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in §63.1363(g)(4) shall be recorded. [§63.1363(g)(7)(iii)(B)]

(8) 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/vapor 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. [§63.1363(g)(8)]

(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section. [§63.1363(g)(9)]

(10) Records of Inspections. The permittee shall keep records specified in §63.1367(f)(1) through (6). [§63.1367(f)]

(i) 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 §63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(1)]

(ii) 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 §63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(2)]

(iii) 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 §63.1367(f)(3)(i) or (ii). [§63.1367(f)(3)]

(A) Hourly records of whether the flow indicator specified under §63.1362(j)(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. [§63.1367(f)(3)(i)]

(iv) For each inspection conducted in accordance with §63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1367(f)(4)(i) through (ix). [§63.1367(f)(4)]

(A) Identification of the leaking equipment. [§63.1367(f)(4)(i)]

(B) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1366(h)(3); or a record of that the leak was detected by sensory observations. [§63.1367(f)(4)(ii)]

(C) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1367(f)(4)(iii)]

(D) Maximum instrument reading measured by the method specified in §63.1366(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1367(f)(4)(iv)]

(E) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1367(f)(4)(v)]

(F) The name, initials, or other form of identification of the permittee (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1367(f)(4)(vi)]

(G) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1367(f)(4)(viii)]

(H) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1367(f)(4)(viii)]

(I) The date of successful repair of the leak. [§63.1367(f)(4)(ix)]

(v) For each inspection conducted in accordance with §63.1366(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. [§63.1367(f)(5)]

(vi) For each visual inspection conducted in accordance with §63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1367(f)(6)]

Reporting:

(a) Reporting Requirements. [§63.1363(h)]

(1) The permittee of a source subject to this section shall submit the reports listed in §63.1363(h)(1)(i). [§63.1363(h)(1)]

(i) Periodic reports described in §63.1363(h)(3). [§63.1363(h)(1)(ii)]

(2) Periodic reports. The permittee of a source subject to this section shall submit Periodic reports. [§63.1363(h)(3)]

(i) A report containing the information in §63.1363(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [§63.1363(h)(3)(i)]

(ii) For equipment complying with the provisions of §63.1363(b) through (g), the Periodic report shall contain the summary information listed in §63.1363(h)(3)(ii)(A) through (L) for each monitoring period during the 6-month period. [§63.1363(h)(3)(ii)]

(A) The number of valves for which leaks were detected as described in §63.1363(e)(2), the percent leakers, and the total number of valves monitored; [§63.1363(h)(3)(ii)(A)]

(B) The number of valves for which leaks were not repaired as required in §63.1363(e)(7), identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(B)]

(C) The number of pumps and agitators for which leaks were detected as described in §63.1363(c)(2), the percent leakers, and the total number of pumps and agitators monitored; [§63.1363(h)(3)(ii)(C)]

(D) The number of pumps and agitators for which leaks were not repaired as required in §63.1363(c)(3); [§63.1363(h)(3)(ii)(D)]

(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part; [§63.1363(h)(3)(ii)(E)]

(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part; [§63.1363(h)(3)(ii)(F)]

(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; [§63.1363(h)(3)(ii)(G)]

(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(H)]

(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1363(h)(3)(ii)(I)]

(J) The results of all monitoring to show compliance with §§63.164(i) and 63.165(a) of subpart H of this part conducted within the semiannual reporting period. [§63.1363(h)(3)(ii)(J)]
(K) If applicable, the initiation of a monthly monitoring program under either §63.1363(c)(4)(ii) or §63.1363(e)(4)(i)(A). [§63.1363(h)(3)(ii)(K)]
(L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of subpart H of this part. [§63.1363(h)(3)(ii)(L)]

(iii) For permittees electing to meet the requirements of §63.178(b) of subpart H of this part, the Periodic report shall include the information listed in §63.1363(h)(3)(iii) (A) through (E) for each process. [§63.1363(h)(3)(iii)]
(A) Product process equipment train identification; [§63.1363(h)(3)(iii)(A)]
(B) The number of pressure tests conducted; [§63.1363(h)(3)(iii)(B)]
(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1363(h)(3)(iii)(C)]
(D) The facts that explain any delay of repairs; and [§63.1363(h)(3)(iii)(D)]
(E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of this part. [§63.1363(h)(3)(iii)(E)]

(iv) Any change in the information submitted under §63.1363(h)(2) shall be provided in the next Periodic report. [§63.1363(h)(3)(iv)]

PERMIT CONDITION (EU0110 and EU0115)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Process vents subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall reduce the uncontrolled organic HAP emissions from a process vent by 98 percent by weight or greater. [§63.1362(b)(2)(ii)(A)]
(b) HCl and Cl_2 emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater. [§63.1362(b)(3)(ii)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION EU0113-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Storage Vessels subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

(a) The permittee shall either determine the group status of a storage vessel or designate it as a Group 1 storage vessel. If the permittee elects to designate the storage vessel as a Group 1 storage vessel, the permittee is not required to determine the maximum true vapor pressure of the material stored in the storage vessel. [§63.1362(c)(1)]

(b) Except as specified in §63.1362(c)(5), the permittee of a Group 1 storage vessel at an existing affected source, as defined in §63.1361, shall equip the affected storage vessel with the following: [§63.1362(c)(2)]
  (1) A closed vent system meeting the conditions of §63.1362(j) and a control device that meets the following condition: [§63.1362(c)(2)(iv)]
    (i) Reduces organic HAP emissions by 95 percent by weight or greater;[§63.1362(c)(2)(iv)(A)]

(c) The permittee is exempt from the specifications in §63.1362(c)(2) through (4) during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage vessel between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded. [§63.1362(c)(5)]

(d) Compliance with the provisions of §63.1362(c)(2) is demonstrated using the initial compliance procedures in §63.1365(d) and the monitoring requirements in §63.1366.. [§63.1362(c)(7)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the process vents are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION PW(PROWL-SAR)-001

10 CSR 10-6.060, Construction Permits Required, Construction Permit Number: 0997-003, Issued on August 29, 1997

Monitoring/Recordkeeping/Reporting:

If a continuing situation or demonstrated nuisance odors exists in violation of 10 CSR 10-3.090, *Restriction of Emission of Odors*, the Director may require the source to submit a corrective action plan within ten days adequate to timely and significantly mitigate the odors. The source shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such plan will be a violation. [Special Condition #4]

PERMIT CONDITION EU0111-001

10 CSR 10-6.060, Construction Permits Required, Construction Permit Number: 0997-003, Issued on August 29, 1997

Emissions Limitations:

1. The permittee shall not emit in excess of 4 lbs SO_2 per ton of sulfuric acid produced and 0.15 lbs of sulfuric acid mist per ton of 100% sulfuric acid produced, respectively. [Modified Special Condition #1.a.1)]
2. The permittee shall not emit in excess of 5.83 lbs NO_x per ton of 100% sulfuric acid produced. [Modified Special Condition #1.a.2)]
3. The permittee shall not emit is excess of 500 ppmv of SO_2 and 35 mg/m^3 of sulfuric acid or sulfur trioxide or any combination of these two gases. [Modified Special Condition #1.a.30]
4. A permit modification shall receive approval from the Air Pollution Control Program prior to any changes in the process or throughput processed at this installation, which would result in emissions equal to or exceeding threshold emissions levels requiring a permit, other than that which is tested at the time of the performance test. [Special Condition #1a.]

Monitoring/Recordkeeping/Reporting:
See Permit Condition EU0111-002 and EU0109-001.

PERMIT CONDITION EU0111-002 and EU0109-001

10 CSR 10-6.060, Construction Permits Required, Construction Permit Number: 062000-019, Issued on December 9, 1998, Construction Permit Amendment Number: 062000-019A, Issued on January 16, 2009, Construction Permit Amendment Number: 062000-019B, Issued on June 10, 2009

Emissions Limitations:
1. The permittee shall emit a combined total of less than 244 tons of nitrogen oxides (NO_x) in any consecutive 12-month period from the Sulfuric Acid Recovery (SAR) System stack (PR-51) and the heat exchanger cleaning process. [Construction Permit Amendment 062000-019B; Special Condition #1.A.]
2. The SAR facility (PR-51) shall emit less than 186 tons of SO2 per consecutive twelve (12) month period. This includes excess emission above 4.0 lbs/ton during start-up. [Permit Amendment 062000-019A, Special Condition #1.E.]

Sulfuric Acid Regeneration (SAR) Facility Start-up Conditions and Emissions Limits
1. The Sulfuric Acid Regeneration Facility shall not have more than twenty (20) start-ups per consecutive twelve (12) month period where SO_2 emissions (from PR-51) exceed the operating limit of 4.0 lbs of SO_2 per ton of acid produced (lbs/ton) on a three-hour average during start-up. [Permit Amendment 062000-019A, Special Condition #1.A.]
2. SO_2 emissions shall not exceed 4.0 lbs/ton on a three-hour average for longer than 12 hours in any single facility start-up. [Permit Amendment 062000-019A, Special Condition #1.B.]
3. Start-up interval begins with acid feed introduction to SAR furnace and concludes twelve (12) hours later, provided that there have been no interruptions of acid feeds lasting longer than fifteen (15) minutes. Acid feed reintroduction following an interruption lasting longer than fifteen (15) minutes shall constitute a new SAR facility start-up. [Permit Amendment 062000-019A, Special Condition #1.C.]
4. Any excess SO_2 emissions above the 4.0 lbs/ton on a three-hour average outside of the above specified allowances lasting more than one (1) hour shall be reported following the requirements of Missouri State Rules 10 CSR 10-6.050, *Start-up, Shutdown, and Malfunction Conditions*. [Permit Amendment 062000-019A, Special Condition #1.D.]

Operating Conditions:
The condenser implemented upon the alkyl separator and filtration hold tank (emission point PR-22) shall be in use at all times when these processes are in operation and shall be operated and maintained in accordance with the installation's design criteria that are the basis of this construction permit application. Ranges of chilled water flow rate and exit gas temperature from the condenser to demonstrate design conditions for achieving volatile organic compound (VOC) control included in this construction permit application shall be determined. The condenser shall be operated within these determined ranges. [Construction Permit 062000-019;Special Condition #7.]

Monitoring:
1. The permittee shall monitor SO_x emissions from the SAR System stack using a continuous emission monitoring system (CEMS) to verify that the annual limit set in Construction Permit

Amendment 062000-019A for SO_x emissions is not exceeded. [Construction Permit 062000-019;Modified Special Condition #4.]

2. The CEMS shall be operated in accordance with Performance Specification 2-Specifications and test procedures for SO_2 and NO_x continuous emission monitoring systems in stationary sources from Appendix B of 40 CFR Part 60. [Construction Permit 062000-019;Special Condition #6.]
3. The chilled water flow rate from the condenser (PR-22) shall be measured at least once per shift. The results of these measurements as well as reasons for any out-of-range flow rates and any corrective action taken shall be recorded daily. [Construction Permit 062000-019;Special Condition #8.]

Recordkeeping:

1. The permittee shall maintain an accurate record of the monthly and the most recent 12-month totals of NO_x emissions to verify that the emissions limit of Construction Permit Amendment 062000-019B, Special Condition #1.A. is not exceeded. The NO_x emissions from the SAR system stack (PR-51) shall be determined using emission factors developed from stack test required in Construction Permit 062000-019. The NO_x emissions from the cleaning process shall be determined using the same method of calculation outlined in the application for Construction Permit Amendment 062000-019B, or another method approved by the Air Pollution Control Program. [Construction Permit Amendment 062000-019B;Special Condition #1.B.]
2. The permittee shall record the monthly and most recent twelve (12) month totals of SO_2 emissions from the SAR facility (PR-51) to verify that the emissions limitation in Construction Permit Amendment 062009-019A, Special Condition 1.E. is not exceeded. The emissions shall include excess emissions above 4.0 lbs/ton. The results from the continuous emissions monitor required by Construction Permit 062000-019, Special Condition #4 shall be used to determine the actual SO_2 emissions. The recordkeeping forms used for compliance shall be approved by the Air Pollution Control Program. [Permit Amendment 062000-019A, Special Condition #1.F.]
3. All records shall be kept on site for the most recent 60-month period and shall be made immediately available for inspection to Department of Natural Resources' personnel upon request. [Construction Permit 062000-019; Modified Special Condition #8.]

Reporting:

The permittee shall report to the Air Pollution Control Program's Enforcement , P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any emission limit specified in this permit condition is exceeded. [Construction Permit 062000-019; Modified Special Condition #11.]

PERMIT CONDITION EU0111-003 and EU0112-001

10 CSR 10-6.220, Restriction of Emissions of Visible Air Contaminants

Emission Limitation:

1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

Monitoring/Record Keeping/Reporting:

As detailed in Core Permit Requirements.

PERMIT CONDITION EU0112-002

10 CSR 10-3.060, Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

The permittee shall not emit particulate matter in excess of 0.16 pounds per million BTU of heat input.

Operation Limitation/Equipment Specifications:

This emission unit shall be limited to burning pipeline grade natural gas.

Monitoring/Record Keeping:

1. The permittee shall maintain on the premises of the installation calculations demonstrating compliance with this rule. These calculations are shown in Tables 25 and 26 of the Statement of Basis.
2. These calculations shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.

Reporting:

Reports of any deviations from monitoring, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.

Central Treatment Systems			
EU#	**EP#**	**Process Description**	**Control Devices**
North Waste Management Area			
EU0116	PR-95/53/54/47	"A" Aqueous Waste Storage Tank (process #633-003); 276,000 gallon capacity; installed 1975-76	condenser (process #631-116) to RCRA incinerators
EU0117	PR-95/53/54/47	"B" Aqueous Waste Storage Tank (process #633-203); 127,000 gallon capacity; installed 1989	condenser (process #631-203) to RCRA incinerators
EU0118	PR-95/53/54/47	"C" Aqueous Waste Storage Tank (process #633-060); 498,000 gallon capacity; installed 1975-76	condenser (process #631-060) to RCRA incinerators
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank (process #633-401); 24,800 gallon capacity; Installed 1999	condenser (process #631-407) to RCRA incinerators
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank (process #633-421); 14,000 gallon capacity; Installed 1999	condenser (process #631-427) to RCRA incinerators
EU0119	PR-39	Organic Waste Storage Tank (process #633-001); 38,600 gallon capacity; installed 1975-76	none
EU0120	PR-95/53/54/47	"A" Waste Blend Tank (process #633-460A); controlled by condenser (process #631-466A) to RCRA incinerators	condenser (process #631-466A) to RCRA incinerators
EU0121	PR-95/53/54/47	"B" Waste Blend Tank (process #633-460B)	condenser (process #631-466B) to RCRA incinerators
EU0122	PR-47	"C" Incinerator (process #633-223); 89.8 MMBtu/hr; Installed 1990, Mfr: Trane Thermal; Natural Gas	described in Statement of Basis
EU0123	PR-53	"A" Incinerator (process #633-005A); 74 MMBtu/hr; Installed 1975, Mfr: John Zink; Natural gas	described in Statement of Basis
EU0124	PR-54	"B" Incinerator (process #633-005B); 74 MMBtu/hr; Installed 1975, Mfr: John Zink; Natural Gas	described in Statement of Basis
EU0125	PR-95	Incinerator Emergency bypass	none
South Waste Management Area			
EU0126	TC-01/02/03/03A	Organic Waste Tank (process #633-001); 5,000 gallon capacity; installed 1991	Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)
EU0127	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003A); 200,000 gallon capacity; installed 1976/modified 1992	Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)
EU0128	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003B); 90,000 gallon capacity; installed 1978/modified 1995	Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)
EU0129	TC-01	"D" Incinerator (process #633-000); 54 MMBtu/hr; Installed 1976, Mfr:Trane; Natural Gas	described in Statement of Basis

PERMIT CONDITION (EU0116 through EU0121, and EU0125 through EU0128)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM. The individual requirements for each type of equipment are detailed in following Permit Conditions.

General Conditions

Emission Limitations/Operating Limitations

a) On and after December 23, 2003, the permittee of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in §63.1363, as summarized in Table 2 to Subpart MMM of Part 63. [§63.1362(a)]

b) Application for approval of construction or reconstruction. For new affected sources, the permittee shall comply with the provisions regarding construction and reconstruction in §63.5 of subpart A of this part. [§63.1367(a)(5)]
c) Opening of a safety device. Opening of a safety device, as defined in §63.1361, is allowed at any time conditions require it to avoid unsafe conditions. [§63.1362(i)]
d) Closed-vent systems. The permittee of a 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 §63.1362(b) through (d) shall comply with the requirements of Table 3 of this subpart and paragraph §63.1362(j)(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. [§63.1362(j)]
   (1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in §63.1367(f)(1). 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 [§63.1362(j)(1)]
   (2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in §63.1367(f)(2). [§63.1362(j)(2)]

Recordkeeping:
The permittee shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in §63.1367(a)(1) through (5). [§63.1367(a)]
(a) The permittee of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part. [§63.1367(a)(1)]

Reporting:
(a) The permittee shall comply with the reporting requirements of §63.1368(b) through (l). The permittee shall also comply with applicable paragraphs of §§63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart. [§63.1368(a)]
(b) The permittee who is subject to §63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to these standards. The application shall be prepared in accordance with §63.5(d) of subpart A of this part. [§63.1368(c)]

Startup, Shutdown, Malfunction:
SSM Plan:
The permittee shall develop a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The permittee of an affected source shall keep the current and superseded versions of this

plan onsite, as specified in §63.6(e)(3)(v) of subpart A of this part. The permittee shall keep the startup, shutdown, and malfunction records specified in paragraphs §63.1367(a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in §63.1368(i). [§63.1367(a)(3)]

(i) The permittee shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with subpart MMM of this part, as specified in §63.6(e)(3)(iii). [§63.1367(a)(3)(i)]
(ii) The permittee shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with subpart MMM of this part. [§63.1367(a)(3)(ii)]
(iii) For each startup, shutdown, or malfunction, the permittee shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in §63.6(e)(3)(iii) of subpart A of this part; alternatively, the permittee shall record any actions taken that are not consistent with the plan, as specified in §63.6(e)(3)(iv) of subpart A of this part. [§63.1367(a)(3)(iii)]

Reporting:
For the purposes of subpart MMM of this part, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under §63.1368(g) instead of the schedule specified in §63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in §63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the permittee or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time the permittee takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee shall submit an immediate startup, shutdown, and malfunction report as specified in §63.10(d)(5)(ii) of subpart A of this part. [§63.1368(i)]

PERMIT CONDITION (EU0116 through EU0121, and EU0125 through EU0128)-002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to all equipment subject to 40 CFR Part 63 Subpart MMM.

Standards for Equipment Leaks:
Emission Limitation/Monitoring-General Equipment Leaks:
(a) General equipment leak requirements. [§63.1363(a)]
(1) The provisions of this section apply to “equipment” as defined in §63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section. [§63.1363(a)(1)]
(2) Consistency with other regulations. After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart: [§63.1363(a)(2)]
(i) 40 CFR Part 60. [§63.1363(a)(2)(i)]
(ii) 40 CFR Part 61. [§63.1363(a)(2)(ii)]
(3) The provisions in §63.1(a)(3) of subpart A of this part do not alter the provisions in §63.1363(a)(2). [§63.1363(a)(4)]
(4) Lines and equipment not containing process fluids are not subject to the provisions of §63.1363. 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. [§63.1363(a)(5)]

(5) The provisions of §63.1363 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 this subpart MMM. [§63.1363(a)(6)]

(6) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. 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 15 calendar days of the end of each monitoring period for that component. [§63.1363(a)(7)]

(7) Equipment that is in vacuum service is excluded from the requirements of this section. [§63.1363(a)(8)]

(8) 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 this section if it is identified as required in §63.1363(g)(9). [§63.1363(a)(9)]

(9) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in §63.180(b) or (c) of subpart H of this part, the following requirements apply: [§63.1363(a)(10)]

(i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [§63.1363(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 §63.1363(e)(7)(iii), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply with §63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in §63.174(c)(1)(i) and no leak is detected during that monitoring. [§63.1363(a)(10)(ii)]

(iii) The identification on equipment, except as specified in §63.1363(a)(10)(ii), may be removed after it has been repaired. [§63.1363(a)(10)(iii)]

(b) The permittee shall comply with the provisions of subpart H of this part as presented below. When the term “process unit” is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes. [§63.1363(b)]

Standards: Compressors.

(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 §63.1363(a) of this subpart 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)]

(i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or [§63.164(b)(1)]

(ii) 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 §63.1362; or [§63.164(b)(2)]

(iii) 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)]

(5) Seal systems [§63.164(e)]
   (i) 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)]
   (ii) 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)]
(6) 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)]
(7) Leak repair [§63.164(g)]
   (i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.164(g)(1)]
   (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.164(g)(2)]
(8) 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 §63.1362 of this subpart. [§63.164(h)]
(9) Any compressor that is designated, as described in §63.1363(g), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of §63.164(a) through (h) if the compressor: [§63.164(i) and §63.1363(b)(1)(vii)]
   (i) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.180(c) of this subpart; and [§63.164(i)(1)]
   (ii) Is tested for compliance with §63.164(i)(1) initially upon designation, annually, and at other times requested by the Administrator. [§63.164(i)(2)]

Standards: 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 parts per million above background except as provided in §63.165(b), as measured by the method specified in §63.180(c) of this subpart. [§63.165(a)]
(2) Pressure releases [§63.165(b)]
   (i) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(b)(1)]
   (ii) No later than 5 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 parts per million above background, as measured by the method specified in §63.180(c) of this subpart. [§63.165(b)(2)]
(3) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in §63.1362 is exempt from the requirements of §63.165(a) and (b). [§63.165(c)]
(4) Rupture disks [§63.165(d)]

(i) 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)]
(ii) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.165(d)(2)]

Standards: 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 §63.1363(a). Gases displaced during filling of the sample container are not required to be collected or captured. [§63.166(a) and §63.1363(b)(1)(i)]
(2) Each closed-purge, closed-loop, or closed-vent system as required in §63.166(a) shall: [§63.166(b)]
(i) Return the purged process fluid directly to the process line; or [§63.166(b)(1)]
(ii) Collect and recycle the purged process fluid to a process; or [§63.166(b)(2)]
(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of §63.1362; or [§63.166(b)(3)]
(iv) 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)]
(A) A waste management unit as defined in §63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility. [§63.166(b)(4)(i)]
(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or [§63.166(b)(4)(ii)]
(C) 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: 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 5 calendar days by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), 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), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.169(a)]
(2) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per

million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected. [§63.169(b)]

(3) Leaks [§63.169(c)]
   (i) 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 of this subpart, with the differences specified in §63.1363(b)(3)(i). [§63.169(c)(1)]
   (ii) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.169(c)(2)]
   (iii) 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)]

(4) First attempts at repair include, but are not limited to, the practices described under §§63.1363(c) and 63.1363(e) of this subpart, for pumps and valves, respectively. [§63.169(d), §63.1363(b)(1)(iii), and §63.1363(b)(1)(v)]

Standards: Delay of repair.

(1) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist: [§63.1363(b)(3)(i)]
   (i) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [§63.1363(b)(3)(i)(A)]
   (ii) 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. [§63.1363(b)(3)(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)]
   (i) 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)]
   (ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §63.1362. [§63.171(c)(2)]

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [§63.171(e)]

Standards: Closed-vent systems and control devices.

(1) Permittees of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. Note: The intent of this provision is to ensure proper operation and maintenance of the control device. [§63.172(e)]

(2) 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)]

(i) If the closed-vent system is constructed of hard-piping, the permittee shall: [§63.172(f)(1)]
  (A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172(f)(1)(i)]
  (B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.172(f)(1)(ii)]
(ii) If the vapor collection system or closed-vent system is constructed of duct work, the permittee shall: [§63.172(f)(2)]
  (A) Conduct an initial inspection according to the procedures in §63.172(g), and [§63.172 (f)(2)(i)]
  (B) Conduct annual inspections according to the procedures in §63.172(g). [§63.172(f)(2)(ii)]

(3) Each closed-vent system shall be inspected according to the procedures in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart. [§63.172(g)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.172(i) of this section. [§63.172(h)]
  (i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.172(h)(1)]
  (ii) 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)]

(5) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the 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 process unit shutdown. [§63.172(i)]

(6) 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)]
  (i) 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) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or [§63.172(j)(1)]
  (ii) 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)]
  (iii) 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)]

(7) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating. [§63.172(m)]

(8) After the compliance dates specified in §63.100 of subpart F of this part, the permittee of any control device subject to this subpart 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 this subpart, 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 this subpart. The permittee shall identify which option has been chosen, in the next periodic report required by §63.1363(h). [§63.172(n)]

Standards: Connectors in gas/vapor service and in light liquid service.

(1) The permittee of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in §63.1363(a) and §63.1363(f) of this subpart , at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(a) and §63.1363(b)(1)(i)]

(i) The connectors shall be monitored to detect leaks by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v). [§63.174(a)(1)]

(ii) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. [§63.174(a)(2)]

(2) The permittee shall monitor for leaks at the intervals specified in §63.1363(b)(3)(iii)(C) through (G). [§63.174(b) and §63.1363(b)(3)(iii)(A)]

(i) 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. [§63.1363(b)(3)(iii)(C)]

(ii) 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 last required monitoring period, monitoring shall be performed once every 4 years. The permittee may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period. [§63.1363(b)(3)(iii)(D)]

(iii) The permittee shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in §63.1363(b)(3)(iii)(D), the first 4 years specified in §63.1363(b)(3)(iii)(G), or the entire 8 years specified in §63.1363(b)(3)(iii)(G). At the end of that 2-year monitoring period, the permittee shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the permittee may again elect to monitor in accordance with §63.1363(b)(3)(iii)(D) or (G), as applicable. [§63.1363(b)(3)(iii)(E)]

(iv) If the permittee complying with the requirements of §63.1363(b)(3)(iii)(D) or (G) for a group of processes determines that 1 percent or greater of the connectors are leaking, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to use the provisions of §63.1363(b)(3)(iii)(D) or (G) after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking. [§63.1363(b)(3)(iii)(F)]

(v) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. The permittee shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 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 §63.1363(b)(3)(iii)(D), (E), or (F). [§63.1363(b)(3)(iii)(G)]

(3) Connectors
(i) Open connectors
(A) 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 3 months after being returned to organic hazardous air pollutants 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)]
(B) As an alternative to the requirements in §63.174(c)(1)(i), a 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 §63.1363(b)(3)(iii)(C) through (G), 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)]
(C) A permittee may switch alternatives described in §63.174(c)(1) (i) and (ii) at the end of the current monitoring period he is in, provided that it is reported as required in §63.1363(h) of this subpart 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) and §63.1363(b)(1)(viii)]
(ii) As an alternative to the requirements of §63.1363(b)(3)(iii)(C) through (G), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in §63.174(c)(2)(iv) may: [§63.174(c)(2)]
(A) Comply with the requirements of §63.169 of this subpart, and [§63.174(c)(2)(i)]
(B) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of §63.174(d). [§63.174(c)(2)(ii)]
(C) The provisions of §63.174(c)(2) apply to screwed connectors installed before November 10, 1997. [§63.174(c)(2)(iv)]
(4) 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 §63.1363(f) and in §63.171 of this subpart, with the differences specified in §63.1363(b)(3)(i). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [§63.174(d)]
(5) For use in determining the monitoring frequency, as specified in §63.1363(b)(3)(iii)(C) through (G), the percent leaking connectors shall be calculated as specified in §63.174(i)(1) and (i)(2). [§63.174(i)]
(i) For the first monitoring period, use the following equation: [§63.174(i)(1)]

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

where:
$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

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

C_C = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(ii) For subsequent monitoring periods, use the following equation: [§63.174(i)(2)]

$$\%C_L = \left[\frac{(C_L - C_{AN})}{(C_t + C_c)}\right] \times 100$$

where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in §63.174(a) and §63.1363(b)(3)(iii)(C) through (G).

C_L = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v).

C_{AN} = Number of allowable nonrepairable connectors, as determined by monitoring required in §63.1363(b)(3)(iii)(C) through (G) and §63.174 (c), not to exceed 2 percent of the total connector population, C_t.

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

C_C = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then $C_C = 0$.

(6) Optional credit for removed connectors. If a permittee eliminates a connector subject to monitoring under §63.1363(b)(3)(iii)(C) through (G), 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). [§63.174(j)]

(i) The connector was welded after November 10, 1997. [§63.174(j)(1)]

(ii) The integrity of the weld is demonstrated by monitoring it according to the procedures in §63.180(b) of this subpart, with the differences specified in §63.1363(b)(3)(v), or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method. [§63.174(j)(2)]

(iii) Welds created after November 10, 1997 but before June 23, 1999 are monitored or tested by 3 months after December 23, 2003. [§63.174(j)(3)]

(iv) Welds created after June 23, 1999 are monitored or tested within 3 months after being welded. [§63.174(j)(4)]

(v) 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 this subpart. [§63.174(j)(5)]

Alternative means of emission limitation: Batch processes.

(1) As an alternative to complying with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b), § 63.171, and §63.174, the permittee of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in §63.178(b) and (c), with the differences specified in §63.1363(b)(3)(iv), or the permittee may petition for approval of an alternative standard under the provisions of §63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The permittee may switch among the alternatives provided the change is documented as specified in §63.1363(g). [§63.178(a)]

(2) The following requirements shall be met if a permittee elects to use pressure testing of process equipment to demonstrate compliance with this subpart. A permittee who complies with the provisions of this paragraph is exempt from the monitoring provisions of §63.1363(c), §63.1363(e), and §63.169 of this subpart. [§63.178(b)]

(i) Each time equipment is reconfigured for production of a different product or intermediate, the process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service. [§63.178(b)(1)]

(A) When the process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment. [§63.178(b)(1)(i)]

(B) Each process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year. [§63.178(b)(1)(ii)]

(C) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate. [§63.178(b)(1)(iii)]

(ii) The batch product process equipment shall be tested either using the procedures specified in §63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in §63.180(g) of this subpart. [§63.178(b)(2)]

(iii) Pressure tests

(A) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss. [§63.178(b)(3)(i)]

(B) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss. [§63.178(b)(3)(ii)]

(iv) Leaks

(A) If a leak is detected, it shall be repaired and the process equipment shall be retested before start-up of the process. [§63.178(b)(4)(i)]

(B) If a process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in §63.178(d) are met. [§63.178(b)(4)(ii)]

(3) The following requirements shall be met if a permittee elects to monitor the equipment to detect leaks by the method specified in §63.180(b), with the differences specified in §63.180(b)(3)(v), of this subpart to demonstrate compliance with this subpart. [§63.178(c)]

(i) The permittee shall comply with the requirements of §63.1363(c), §§63.164 through 63.166, §63.1363(d), §63.1363(e), §63.1362(b),, and §§63.172 through 63.174 of this subpart. [§63.178(c)(1)]

(ii) The equipment shall be monitored for leaks by the method specified in §63.180(b), with the differences specified in §63.1363(b)(3)(v), of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.178(c)(2)]

(iii) The equipment shall be monitored for leaks as specified below: [§63.178(c)(3)]

(A) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit. [§63.178(c)(3)(i)]

(B) Connectors shall be monitored in accordance with the requirements in §63.174 of this subpart. [§63.178(c)(3)(ii)]

(C) Equipment other than connectors shall be monitored quarterly. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating. [§63.178(c)(3)(iii) and §63.1363(b)(3)(iv)(B)]

(D) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. A permittee may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating. [§63.178(c)(3)(iv)]

(iv) If 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 §63.178(d). [§63.178(c)(4)]

(4) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met: [§63.178(d)]

(i) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted. [§63.178(d)(1)]

(ii) The repair is made no later than 10 calendar days after delivery of the replacement equipment. [§63.178(d)(2)]

(c) Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service. [§63.1363(c)]

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service. [§63.1363(c)(1)]

(2) Monitoring [§63.1363(c)(2)]

(i) Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in §63.180(b), except as provided in §63.1363(f), and §63.1363(c)(5) through (9). [§63.1363(c)(2)(i)]

(ii) Leak definition. The instrument reading, as determined by the method as specified in §63.180(b) of subpart H of this part, that defines a leak is: [§63.1363(c)(2)(ii)]

(A) For agitators, an instrument reading of 10,000 parts per million or greater. [§63.1363(c)(2)(ii)(A)]

(B) For pumps, an instrument reading of 2,000 parts per million or greater. [§63.1363(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 seal at the time of the weekly inspection, the permittee shall follow the procedure specified in either §63.1363(c)(2)(iii)(A) or (B) prior to the next weekly inspection. [§63.1363(c)(2)(iii)]

(A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(2)(iii)(A)]

(B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(2)(iii)(B)]

(3) Repair provisions. [§63.1363(c)(3)]

(i) When a leak is detected pursuant to §63.1363(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 §63.1363(b)(3)(i). [§63.1363(c)(3)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(c)(3)(ii)]

(A) Tightening of packing gland nuts. [§63.1363(c)(3)(ii)(A)]

(B) Ensuring that the seal flush is operating at design pressure and temperature. [§63.1363(c)(3)(ii)(B)]

(4) Calculation of percent leakers. [§63.1363(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. [§63.1363(c)(4)(i)]

(ii) If, calculated on a 1–year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the permittee shall monitor each pump once per month, until the calculated 1–year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps). [§63.1363(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 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [§63.1363(c)(4)(iii)]

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart: [§63.1363(c)(4)(iv)]

$$\% \ P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)} \right] \times 100$$

Where: $\% P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in §63.1363(c)(2)(i) and (ii)

P_T = total pumps in organic HAP service, including those meeting the criteria in §63.1363(c)(5) and (6).

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

(5) Exemptions. Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in §63.1363(c)(5)(i)

through (vii) is exempt from the requirements of §63.1363(c)(1) through (c)(4)(iii), except as specified in §63.1363(c)(5)(iv)(A) and (vii). [§63.1363(c)(5)]

(i) Each dual mechanical seal system is: [§63.1363(c)(5)(i)]
  (A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [§63.1363(c)(5)(i)(A)]
  (B) 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 §63.1363(b)(3)(ii); or [§63.1363(c)(5)(i)(B)]
  (C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [§63.1363(c)(5)(i)(C)]

(ii) The barrier fluid is not in light liquid service. [§63.1363(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. [§63.1363(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 §63.1363(c)(5)(iv)(A) or (B) prior to the next required inspection. [§63.1363(c)(5)(iv)]
  (A) 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 §63.1363(c)(2)(ii), a leak is detected. [§63.1363(c)(5)(iv)(A)]
  (B) The permittee shall eliminate the visual indications of liquids dripping. [§63.1363(c)(5)(iv)(B)]

(v) Each sensor as described in §63.1363(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. [§63.1363(c)(5)(v)]

(vi) Drips [§63.1363(c)(5)(vi)]
  (A) 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. [§63.1363(c)(5)(vi)(A)]
  (B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in §63.1363(c)(5)(vi)(A), or if, based on the criteria established in §63.1363(c)(5)(vi)(A), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected. [§63.1363(c)(5)(vi)(B)]

(vii) When a leak is detected pursuant to §63.1363(c)(5)(iv)(A) or (vi)(B), the leak must be repaired as specified in §63.1363(c)(3). [§63.1363(c)(5)(vii)]

(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of §63.1363(c)(1) through (3). [§63.1363(c)(6)]

(7) 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 §63.1363(b)(3)(ii) is exempt from the requirements of §63.1363(c)(2) through (5). [§63.1363(c)(7)]

(8) If more than 90 percent of the pumps in a group of processes meet the criteria in either §63.1363(c)(5) or (6), the group of processes is exempt from the requirements of §63.1363(c)(4). [§63.1363(c)(9)]

(d) Standards: open-ended valves or lines. [§63.1363(d)]

(1) Open ended valves or lines [§63.1363(d)(1)]

(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.1363(d)(4) through (6). [§63.1363(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 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. [§63.1363(d)(1)(ii)]

(2) 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. [§63.1363(d)(2)]

(3) 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 §63.1363(d)(1) at all other times. [§63.1363(d)(3)]

(4) 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 §63.1363(d)(1) through (3). [§63.1363(d)(4)]

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(5)]

(6) 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 §63.1363(d)(1) through (3) are exempt from the requirements of §63.1363(d)(1) through (3). [§63.1363(d)(6)]

(e) Standards: valves in gas/vapor service and in light liquid service. [§63.1363(e)]

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service. [§63.1363(e)(1)]

(2) For existing affected sources, all valves subject to this section shall be monitored, except as provided in §63.1363(f) by no later than 1 year after December 23, 2003. [§63.1363(e)(2)]

(3) Monitoring. The permittee of a source subject to this section shall monitor all valves, except as provided in §63.1363(f), at the intervals specified in §63.1363(e)(4) and shall comply with all other provisions of this section, except as provided in §63.1363(b)(3)(i). [§63.1363(e)(3)]

(i) The valves shall be monitored to detect leaks by the method specified in §63.180(b) of subpart H of this part. [§63.1363(e)(3)(i)]

(ii) An instrument reading of 500 parts per million or greater defines a leak. [§63.1363(e)(3)(ii)]

(4) Subsequent monitoring frequencies. After conducting the initial survey required in §63.1363(e)(2) the permittee shall monitor valves for leaks at the intervals specified below: [§63.1363(e)(4)]

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to §63.1363(e)(6), the permittee shall monitor each valve once per month, except as specified in §63.1363(e)(9). [§63.1363(e)(4)(i)]

(ii) For a group of processes with less than 2 percent leaking valves, the permittee shall monitor each valve once each quarter, except as provided in §63.1363(e)(4)(iii) through (v). [§63.1363(e)(4)(ii)]

(iii) For a group of processes with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters. [§63.1363(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 4 quarters. [§63.1363(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 2 years. [§63.1363(e)(4)(v)]

(5) Calculation of percent leakers. For a group of processes to which this subpart applies, the permittee may choose to subdivide the valves in the applicable group of processes and apply the provisions of §63.1363(e)(4) to each subgroup. If the permittee elects to subdivide the valves in the applicable group of processes, then the provisions of §63.1363(e)(5)(i) through (viii) apply. [§63.1363(e)(5)]

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to §63.1363(e)(3)(i) and (ii) and as calculated according to §63.1363(e)(6)(ii) and (iii). [§63.1363(e)(5)(i)]

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of §63.1363(e)(5)(ii) (A) through (C). [§63.1363(e)(5)(ii)]

(A) The permittee shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained. [§63.1363(e)(5)(ii)(A)]

(B) 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 must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [§63.1363(e)(5)(ii)(B)]

(C) 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. [§63.1363(e)(5)(ii)(C)]

(iii) The permittee shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 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 2 percent leaking valves or greater, the permittee shall revert to the program required in §63.1363(e)(2) through (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 Equation 4 of this subpart: [§63.1363(e)(5)(iii)]

$$\% \ V_{LO} = \frac{\sum_{i=1}^{n} \left(\% \ V_{Li} \times V_i \right)}{\sum_{i=1}^{n} V_i}$$

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

$\% \ V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in §63.1363(e)(6)(ii) and (iii)

V_i = number of valves in subgroup i

n = number of subgroups

(iv) Records. In addition to records required by §63.1363(g), the permittee shall maintain records specified in §63.1363(e)(5)(iv)(A) through (D). [§63.1363(e)(5)(iv)]

(A) Which valves are assigned to each subgroup, [§63.1363(e)(5)(iv)(A)]

(B) Monitoring results and calculations made for each subgroup for each monitoring period, [§63.1363(e)(5)(iv)(B)]

(C) Which valves are reassigned and when they were reassigned, and [§63.1363(e)(5)(iv)(C)]

(D) The results of the semiannual overall performance calculation required in §63.1363(e)(5)(iii). [§63.1363(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. [§63.1363(e)(5)(v)]

(vi) Semiannual reports. In addition to the information required by §63.1363(h)(3), the permittee shall submit in the Periodic reports the information specified in §63.1363(e)(5)(vi) (A) and (B). [§63.1363(e)(5)(vi)]

(A) Valve reassignments occurring during the reporting period, and [§63.1363(e)(5)(vi)(A)]

(B) Results of the semiannual overall performance calculation required by §63.1363(e)(5)(iii). [§63.1363(e)(5)(vi)(B)]

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of §63.1363(e)(6)(iii) shall be used. [§63.1363(e)(5)(vii)]

(viii) Except for the overall performance calculations required by §63.1363(e)(5)(i) and (iii), each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section. [§63.1363(e)(5)(viii)]

(6) Percentage Calculations [§63.1363(e)(6)]

(i) The permittee shall decide no later than the implementation date of this subpart 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. [§63.1363(e)(6)(i)]

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart: [§63.1363(e)(6)(ii)]

$$\% \ V_L = \left[\frac{V_L}{V_T}\right] \times 100$$

Where: % V_L = percent leaking valves

V_L = number of valves found leaking excluding nonrepairables as provided in §63.1363(e)(6)(iv)(A)

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by §63.1363(e)(7)(iii)

(iii) 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 2 years) monitoring

frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [§63.1363(e)(6)(iii)]

(iv) Nonrepairable valves [§63.1363(e)(6)(iv)]

(A) 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 §63.1363(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 1 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. [§63.1363(e)(6)(iv)(A)]

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [§63.1363(e)(6)(iv)(B)]

(7) Repair provisions. [§63.1363(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 §63.1363(b)(3)(i). [§63.1363(e)(7)(i)]

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [§63.1363(e)(7)(ii)]

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-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.” [§63.1363(e)(7)(iii)]

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking. [§63.1363(e)(7)(iii)(A)]

(B) Periodic monitoring required by §63.1363(e)(2) through (4) may be used to satisfy the requirements of §63.1363(e)(7)(iii), if the timing of the monitoring period coincides with the time specified in §63.1363(e)(7)(iii). Alternatively, other monitoring may be performed to satisfy the requirements of §63.1363(e)(7)(iii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in §63.1363(e)(7)(iii). [§63.1363(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to §63.1363(e)(7)(iii), the permittee shall follow the provisions of §63.1363(e)(7)(iii)(C)(*1*) and (*2*) to determine whether that valve must be counted as a leaking valve for purposes of §63.1363(e)(6). [§63.1363(e)(7)(iii)(C)]

(*1*) If the permittee elects to use periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(e)(7)(iii), then the valve shall be counted as a leaking valve. [§63.1363(e)(7)(iii)(C)(1)]

(*2*) If the permittee elects to use other monitoring prior to the periodic monitoring required by §63.1363(e)(2) through (4) to satisfy the requirements of §63.1363(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. [§63.1363(e)(7)(iii)(C)(2)]

(8) First attempts at repair include, but are not limited to, the following practices where practicable: [§63.1363(e)(8)]

(i) Tightening of bonnet bolts, [§63.1363(e)(8)(i)]
(ii) Replacement of bonnet bolts, [§63.1363(e)(8)(ii)]
(iii) Tightening of packing gland nuts, and [§63.1363(e)(8)(iii)]
(iv) Injection of lubricant into lubricated packing. [§63.1363(e)(8)(iv)]

(9) 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 §63.1363(e)(4)(i). Instead, the permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with §63.1363(e)(4)(iii), (iv), or (v), except as provided in §63.1363(f). [§63.1363(e)(9)]

(f) Unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [§63.1363(f)]

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in §63.1363(f)(1)(i) through (iv) provided the permittee meets the requirements specified in §63.1363(f)(2), (3), or (4), as applicable. All equipment, except connectors that meet the requirements in §63.1363(f)(4), must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors. [§63.1363(f)(1)]

(i) For pumps and agitators, §63.1363(c)(2), (3), and (4) do not apply. [§63.1363(f)(1)(i)]
(ii) For valves, §63.1363(e)(2) through (7) do not apply. [§63.1363(f)(1)(ii)]
(iii) For connectors, §63.174(b) through (e) and §63.1363(b)(3)(iii)(C) through (G) do not apply. [§63.1363(f)(1)(iii)]
(iv) For closed-vent systems, §63.172(f)(1), (f)(2), and (g) do not apply. [§63.1363(f)(1)(iv)]

(2) Equipment that is unsafe-to-monitor. [§63.1363(f)(2)]

(i) Valves, connectors, agitators, and any part of closed-vent systems 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 identified in §63.1363(f)(1)(i) through (iii), or the inspection requirements identified in §63.1363(f)(1)(iv). [§63.1363(f)(2)(i)]
(ii) The permittee of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed vent systems, inspections shall not be more frequent than annually. [§63.1363(f)(2)(ii)]

(3) Equipment that is difficult-to-monitor. [§63.1363(f)(3)]

(i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the permittee determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service; [§63.1363(f)(3)(i)]
(ii) The permittee of valves, agitators, or pumps designated as difficult-to-monitor must 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-monitor, the permittee must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [§63.1363(f)(3)(iii)]

(4) Inaccessible, ceramic, or ceramic-lined connectors. [§63.1363(f)(4)]

(i) A connector may be designated as inaccessible if it is: [§63.1363(f)(4)(i)]

(A) Buried; [§63.1363(f)(4)(i)(A)]
(B) Insulated in a manner that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(B)]
(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe; [§63.1363(f)(4)(i)(C)]
(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or [§63.1363(f)(4)(i)(D)]
(E) 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. [§63.1363(f)(4)(i)(E)]
(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [§63.1363(f)(4)(i)(F)]

(ii) 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 §63.1363(b)(3)(i). [§63.1363(f)(4)(iii)]

(iii) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of §63.1363(g) and (h). [§63.1363(f)(4)(iv)]

<u>Emission Limitation/Monitoring-Vapor Suppression Equipment [§63.1366(h)]:</u>

(a) Leak inspection provisions for vapor suppression equipment. [§63.1366(h)]

(1) Except as provided in §63.1366(h)(9) and (10), for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the permittee shall comply with the requirements of §63.1366(h)(2) through (8). [§63.1366(h)(1)]

(2) Except as provided in §63.1366(h)(6) and (7), each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(i) and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in §63.1366(h)(2)(iii). [§63.1366(h)(2)]

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the permittee shall: [§63.1366(h)(2)(i)]
(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(i)(A)]
(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(i)(B)]

(ii) For each fixed roof, cover, and enclosure, the permittee shall: [§63.1366(h)(2)(iii)]
(A) Conduct an initial inspection according to the procedures in §63.1366(h)(3), and [§63.1366(h)(2)(iii)(A)]
(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks. [§63.1366(h)(2)(iii)(B)]

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in §63.1366(h)(3)(i) through (vi). [§63.1366(h)(3)]

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR Part 60, appendix A. [§63.1366(h)(3)(i)]

(ii) Detection instrument performance criteria. [§63.1366(h)(3)(ii)]
(A) Except as provided in §63.1366(h)(3)(ii)(B), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the 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. [§63.1366(h)(3)(ii)(A)]
(B) If no instrument is available at the plant site that will meet the performance criteria specified in §63.1366(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 §63.1366(h)(3)(ii)(A). [§63.1366(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 40 CFR Part 60, appendix A. [§63.1366(h)(3)(iii)]
(iv) Calibration gases shall be as follows: [§63.1366(h)(3)(iv)]
(A) Zero air (less than 10 parts per million hydrocarbon in air); and [§63.1366(h)(3)(iv)(A)]
(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. 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 §63.1366(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. [§63.1366(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. [§63.1366(h)(3)(v)]
(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance. [§63.1366(h)(3)(vi)]

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in §63.1366(h)(5). [§63.1366(h)(4)]
(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [§63.1366(h)(4)(i)]
(ii) Repair shall be completed no later than 15 calendar days after the leak is detected. [§63.1366(h)(4)(ii)]

(5) 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 §63.1361, 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. [§63.1366(h)(5)]

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii) if: [§63.1366(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 §63.1366(h)(2)(i), (ii), or (iii); and [§63.1366(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. Inspection is not required more than once annually. [§63.1366(h)(6)(ii)]
(7) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in §63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of §63.1366(h)(2)(i), (ii), and (iii)(A) if: [§63.1366(h)(7)]
  (i) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and [§63.1366(h)(7)(i)]
  (ii) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. [§63.1366(h)(7)(ii)]
(8) Records shall be maintained as specified in §63.1367(f). [§63.1366(h)(8)]
(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of §63.1363, the permittee shall comply with the provisions of §63.1363 and is exempt from the requirements of this section. [§63.1366(h)(9)]

Test Methods:

(a) Each permittee subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section. [§63.180(a)]
(b) Monitoring, as required under this subpart, shall comply with the following requirements: [§63.180(b)]
  (1) Monitoring shall comply with Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(1)]
  (2) Detection instruments [§63.180(b)(2)]
    (i) Except as provided for in §63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. [§63.180(b)(2)(i)]
    (ii) If no instrument is available at the plant site that will meet the performance criteria specified in §63.180(b)(2)(i), 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 §63.180(b)(2)(i). [§63.180(b)(2)(ii)]
  (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, appendix A. [§63.180(b)(3)]
  (4) Calibration gases shall be: [§63.180(b)(4)]
    (i) Zero air (less than 10 parts per million of hydrocarbon in air); and [§63.180(b)(4)(i)]
    (ii) 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 §63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of

the compounds to be measured in air. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as specified in §63.180(b)(4)(iii) of subpart H. [§63.180(b)(4)(ii) and §63.1363(b)(3)(v)]

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. [§63.180(b)(4)(iii)]

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor. [§63.180(b)(5)]

(6) Monitoring data that do not meet the criteria specified in §63.180(b)(1)through (b)(5) may be used to qualify for less frequent monitoring under the provisions in §63.1363(e) or §63.1363(b)(3)(iii)(C) through (G) provided the data meet the conditions specified in §63.180(b)(6)(ii). [§63.180(b)(6), §63.1363(b)(1)(v), and §63.1363(b)(3)(iii)(A)]

(i) The departures from the criteria specified in §63.180(b)(1) through (b)(5) or from the specified monitoring frequency of §63.1363(e) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of appendix A of 40 CFR Part 60 instead of §63.180(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure. [§63.180(b)(6)(ii) and §63.1363(b)(1)(v)]

(c) When equipment is monitored for compliance as required in §§63.164(i), and 63.165(a) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the permittee may elect to adjust or not to adjust the instrument readings for background. If a permittee elects to not adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(b)(1) through (b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If a permittee elects to adjust instrument readings for background, the permittee shall monitor the equipment according to the procedures specified in §63.180(c)(1) through (c)(4). [§63.180(c)]

(1) The requirements of §63.180(b) (1) through (4) shall apply. [§63.180(c)(1)]

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking. [§63.180(c)(2)]

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR Part 60, appendix A. [§63.180(c)(3)]

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance. [§63.180(c)(4)]

(d) Organic HAP service [§63.180(d)]

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, appendix A shall be used. [§63.180(d)(1)]

(2) Other methods [§63.180(d)(2)]

(i) A permittee may use good engineering judgment rather than the procedures in §63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When a permittee and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in §63.180(d)(1) shall be used to resolve the disagreement. [§63.180(d)(2)(i)]

(ii) Conversely, the permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent. [§63.180(d)(2)(ii)]

(3) If a permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in §63.180(d)(1), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service. [§63.180(d)(3)]

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment. [§63.180(d)(4)]

(e) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of §63.178(b)(3)(i) of this subpart. [§63.180(f)]

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum. [§63.180(f)(1)]

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off. [§63.180(f)(2)]

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation: [§63.180(f)(3)]

$$\Delta\frac{P}{t} = \frac{\left(\left|P_f - P_i\right|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta\frac{P}{t}$ =Change in pressure, psig/hr.

P_f=Final pressure, psig.
P_i=Initial pressure, psig.
$t_f - t_i$ =Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the permittee shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour. [§63.180(f)(4)]

(5) An alternative procedure may be used for leak testing the equipment if the permittee demonstrates the alternative procedure is capable of detecting a pressure loss or rise. [§63.180(f)(5)]

(f) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of §63.178(b)(3)(ii) of this subpart. [§63.180(g)]

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off. [§63.180(g)(1)]

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure. [§63.180(g)(2)]

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected. [§63.180(g)(3)]

(4) An alternative procedure may be used for leak testing the equipment, if the permittee demonstrates the alternative procedure is capable of detecting losses of fluid. [§63.180(g)(4)]

Recordkeeping:

(a) Recordkeeping requirements. [§63.1363(g)]

(1) The permittee of more than one group of processes subject to the provisions of this section 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. [§63.1363(g)(1)]

(2) General recordkeeping. Except as provided in §63.1363(g)(5), the following information pertaining to all equipment subject to the requirements in this section shall be recorded: [§63.1363(g)(2)]

(i) Information required [§63.1363(g)(2)(i)]

(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to §63.1363(f), need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors 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 within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored. [§63.1363(g)(2)(i)(A)]

(B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of subpart H of this part and valves subject to the provisions of §63.1363(e)(4). [§63.1363(g)(2)(i)(B)]

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(2)(i)(C)]

(ii) Identification numbers [§63.1363(g)(2)(ii)]

(A) 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 §63.1363(c)(7) or §§63.164(h) or 63.165(c) of subpart H of this part. [§63.1363(g)(2)(ii)(A)]

(B) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.164(i) of subpart H of this part. [§63.1363(g)(2)(ii)(B)]

(iii) Identification numbers [§63.1363(g)(2)(iii)]

(A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of subpart H of this part. [§63.1363(g)(2)(iii)(A)]

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of subpart H of this part. [§63.1363(g)(2)(iii)(B)]

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified. [§63.1363(g)(2)(iv)]

(v) The following information shall be recorded for each dual mechanical seal system: [§63.1363(g)(2)(v)]

(A) Design criteria required by §63.1363(c)(5)(vi)(A) and §63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and [§63.1363(g)(2)(v)(A)]

(B) Any changes to these criteria and the reasons for the changes. [§63.1363(g)(2)(v)(B)]

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under §63.1363(f) and a copy of the plan for monitoring this equipment. [§63.1363(g)(2)(vi)]

(vii) A list of connectors removed from and added to the process, as described in §63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used. [§63.1363(g)(2)(vii)]

(viii) For batch processes that the permittee elects to monitor as provided under §63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in §63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored. [§63.1363(g)(2)(viii)]

(3) Records of visual inspections. For visual inspections of equipment subject to the provisions of §63.1363(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

§63.1363(g)(4) for leaking equipment identified in this inspection, except as provided in §63.1363(g)(5). These records shall be retained for 5 years. [§63.1363(g)(3)]

(4) Monitoring records. When each leak is detected as specified in §63.1363(c) and (e) and §§63.164, 63.169, and 63.174 of subpart H of this part, the permittee shall record the information specified in §63.1363(g)(4)(i) through (viii). All records shall be retained for 5 years, in accordance with the requirements of §63.10(b)(1) of subpart A of this part. [§63.1363(g)(4)]

(i) The instrument and the equipment identification number and the operator name, initials, or identification number. [§63.1363(g)(4)(i)]

(ii) The date the leak was detected and the date of first attempt to repair the leak. [§63.1363(g)(4)(ii)]

(iii) The date of successful repair of the leak. [§63.1363(g)(4)(iii)]

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR Part 60, appendix A, after it is successfully repaired or determined to be nonrepairable. [§63.1363(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. [§63.1363(g)(4)(v)]

(A) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by §63.1367(a), for the source or may be part of a separate 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. [§63.1363(g)(4)(v)(A)]

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [§63.1363(g)(4)(v)(B)]

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [§63.1363(g)(4)(vi)]

(vii) Monitoring [§63.1363(g)(4)(vii)]

(A) If the alternative in §63.174(c)(1)(ii) of subpart H of this part 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) of subpart H of this part, as described in §63.174(c)(1) of subpart H of this part. [§63.1363(g)(4)(vii)(A)]

(B) The date and results of follow-up monitoring as required in §63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [§63.1363(g)(4)(vii)(B)]

(viii) The date and results of the monitoring required in §63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in §63.178(c)(3)(ii) and (iii)of subpart H of this part. 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. [§63.1363(g)(4)(viii)]

(ix) Copies of the periodic reports as specified in §63.1363(h)(3), if records are not maintained on a computerized data base capable of generating summary reports from the records. [§63.1363(g)(4)(ix)]

(5) Records of pressure tests. The permittee who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this

section is exempt from the requirements of §63.1363(g)(2), (3), (4), and (6). Instead, the permittee shall maintain records of the following information: [§63.1363(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. [§63.1363(g)(5)(i)]

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the permittee does not adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii) of subpart H of this part. [§63.1363(g)(5)(ii)]

(iii) 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 this section may be identified on a plant site plan, in log entries, or by other appropriate methods. [§63.1363(g)(5)(iii)]

(iv) The dates of each pressure test required in §63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test. [§63.1363(g)(5)(iv)]

(v) Records of any visible, audible, or olfactory evidence of fluid loss. [§63.1363(g)(5)(v)]

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years: [§63.1363(g)(5)(vi)]

(A) The date of each pressure test and the date of each leak repair attempt. [§63.1363(g)(5)(vi)(A)]

(B) Repair methods applied in each attempt to repair the leak. [§63.1363(g)(5)(vi)(B)]

(C) The reason for the delay of repair. [§63.1363(g)(5)(vi)(C)]

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [§63.1363(g)(5)(vi)(D)]

(E) The date of successful repair. [§63.1363(g)(5)(vi)(E)]

(6) Records of compressor and pressure relief valve compliance tests. The dates and results of each compliance test required for compressors subject to the provisions in §63.164(i) of subpart H of this part 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) of subpart H of this part. The results shall include: [§63.1363(g)(6)]

(i) The background level measured during each compliance test. [§63.1363(g)(6)(i)]

(ii) The maximum instrument reading measured at each piece of equipment during each compliance test. [§63.1363(g)(6)(ii)]

(7) Records for closed-vent systems. The permittee shall maintain records of the information specified in §63.1363(g)(7)(i) through (iii) for closed-vent systems and control devices subject to the provisions of §63.1363(b)(3)(ii). The records specified in §63.1363(g)(7)(i) shall be retained for the life of the equipment. The records specified in §63.1363(g) (7)(ii) and (iii) shall be retained for 5 years. [§63.1363(g)(7)]

(i) The design specifications and performance demonstrations specified in §63.1363(g)(7)(i)(A) through (C). [§63.1363(g)(7)(i)]

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [§63.1363(g)(7)(i)(A)]

(B) The dates and descriptions of any changes in the design specifications. [§63.1363(g)(7)(i)(B)]

(C) A description of the parameter or parameters monitored, as required in §63.1363(b)(3)(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. [§63.1363(g)(7)(i)(D)]

(ii) Records of operation of closed-vent systems and control devices. [§63.1363(g)(7)(ii)]

(A) Dates and durations when the closed-vent systems and control devices required in §63.1363(c) and §§63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters. [§63.1363(g)(7)(ii)(A)]

(B) Dates and durations during which the monitoring system or monitoring device is inoperative. [§63.1363(g)(7)(ii)(B)]

(C) Dates and durations of startups and shutdowns of control devices required in §63.1363(c) of this section and §§63.164 through 63.166 of subpart H of this part. [§63.1363(g)(7)(ii)(C)]

(iii) Records of inspections of closed-vent systems subject to the provisions of §63.172 of subpart H of this part. [§63.1363(g)(7)(iii)]

(A) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (2) of subpart H of this part 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. [§63.1363(g)(7)(iii)(A)]

(B) For each inspection conducted in accordance with the provisions of §63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in §63.1363(g)(4) shall be recorded. [§63.1363(g)(7)(iii)(B)]

(8) 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/vapor 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. [§63.1363(g)(8)]

(9) Records of exempt components. Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section. [§63.1363(g)(9)]

(10) Records of Inspections. The permittee shall keep records specified in §63.1367(f)(1) through (6). [§63.1367(f)]

(i) 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 §63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(1)]

(ii) 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 §63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment. [§63.1367(f)(2)]

(iii) 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 §63.1367(f)(3)(i) or (ii). [§63.1367(f)(3)]

(A) Hourly records of whether the flow indicator specified under §63.1362(j)(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. [§63.1367(f)(3)(i)]

(iv) For each inspection conducted in accordance with §63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in §63.1367(f)(4)(i) through (ix). [§63.1367(f)(4)]

(A) Identification of the leaking equipment. [§63.1367(f)(4)(i)]

(B) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in §63.1366(h)(3); or a record of that the leak was detected by sensory observations. [§63.1367(f)(4)(ii)]

(C) The date the leak was detected and the date of the first attempt to repair the leak. [§63.1367(f)(4)(iii)]

(D) Maximum instrument reading measured by the method specified in §63.1366(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [§63.1367(f)(4)(iv)]

(E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [§63.1367(f)(4)(v)]

(F) The name, initials, or other form of identification of the permittee (or designee) whose decision it was that repair could not be effected without a shutdown. [§63.1367(f)(4)(vi)]

(G) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days. [§63.1367(f)(4)(viii)]

(H) Dates of shutdowns that occur while the equipment is unrepaired. [§63.1367(f)(4)(viii)]

(I) The date of successful repair of the leak. [§63.1367(f)(4)(ix)]

(v) For each inspection conducted in accordance with §63.1366(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. [§63.1367(f)(5)]

(vi) For each visual inspection conducted in accordance with §63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [§63.1367(f)(6)]

Reporting:

(a) Reporting Requirements. [§63.1363(h)]

(1) The permittee of a source subject to this section shall submit the reports listed in §63.1363(h)(1)(i). [§63.1363(h)(1)]

(i) Periodic reports described in §63.1363(h)(3). [§63.1363(h)(1)(ii)]

(2) Periodic reports. The permittee of a source subject to this section shall submit Periodic reports. [§63.1363(h)(3)]

(i) A report containing the information in §63.1363(h)(3)(ii), (iii), and (iv) shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [§63.1363(h)(3)(i)]

(ii) For equipment complying with the provisions of §63.1363(b) through (g), the Periodic report shall contain the summary information listed in §63.1363(h)(3)(ii)(A) through (L) for each monitoring period during the 6-month period. [§63.1363(h)(3)(ii)]

(A) The number of valves for which leaks were detected as described in §63.1363(e)(2), the percent leakers, and the total number of valves monitored; [§63.1363(h)(3)(ii)(A)]
(B) The number of valves for which leaks were not repaired as required in §63.1363(e)(7), identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(B)]
(C) The number of pumps and agitators for which leaks were detected as described in §63.1363(c)(2), the percent leakers, and the total number of pumps and agitators monitored; [§63.1363(h)(3)(ii)(C)]
(D) The number of pumps and agitators for which leaks were not repaired as required in §63.1363(c)(3); [§63.1363(h)(3)(ii)(D)]
(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part; [§63.1363(h)(3)(ii)(E)]
(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part; [§63.1363(h)(3)(ii)(F)]
(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored; [§63.1363(h)(3)(ii)(G)]
(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable; [§63.1363(h)(3)(ii)(H)]
(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [§63.1363(h)(3)(ii)(I)]
(J) The results of all monitoring to show compliance with §§63.164(i) and 63.165(a) of subpart H of this part conducted within the semiannual reporting period. [§63.1363(h)(3)(ii)(J)]
(K) If applicable, the initiation of a monthly monitoring program under either §63.1363(c)(4)(ii) or §63.1363(e)(4)(i)(A). [§63.1363(h)(3)(ii)(K)]
(L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of subpart H of this part. [§63.1363(h)(3)(ii)(L)]

(iii) For permittees electing to meet the requirements of §63.178(b) of subpart H of this part, the Periodic report shall include the information listed in §63.1363(h)(3)(iii) (A) through (E) for each process. [§63.1363(h)(3)(iii)]
(A) Product process equipment train identification; [§63.1363(h)(3)(iii)(A)]
(B) The number of pressure tests conducted; [§63.1363(h)(3)(iii)(B)]
(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [§63.1363(h)(3)(iii)(C)]
(D) The facts that explain any delay of repairs; and [§63.1363(h)(3)(iii)(D)]
(E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of this part. [§63.1363(h)(3)(iii)(E)]

(iv) Any change in the information submitted under §63.1363(h)(2) shall be provided in the next Periodic report. [§63.1363(h)(3)(iv)]

PERMIT CONDITION (EU0116 through EU0121, and EU0126 through EU0128)-003

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart MMM-National Emissions Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This permit condition applies to Wastewater and Wastewater Tanks subject to the requirements of 40 CFR 63 Subpart MMM:

Emission Limitations:

Wastewater and wastewater tanks

(a) The permittee of each affected source shall comply with the requirements of §§63.132 through 63.147. [§63.1362(d)]

(1) The permittee shall comply with the requirements in §63.132(a)(2), no later than December 23, 2003. .[§63.132(a) and §63.1362(d)(11)]

(i) For wastewater streams that are Group 1 for Table 9 compounds, comply with §63.132(a)(2)(i). .[§63.132(a)(2)]

(A) Comply with the applicable requirements for wastewater tanks as specified in §63.133 through §63.137 of this subpart, except as provided in paragraphs §63.132(a)(2)(i)(A) and (a)(2)(i)(B). .[§63.132(a)(2)(i)]

(1) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions. .[§63.132(a)(2)(i)(A)]

(2) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices. .[§63.132(a)(2)(i)(B)]

(2) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the permittee shall comply with the requirements of either §63.133(a)(1) or (a)(2) as specified in table 10 of this subpart. [§63.133(a)] Note: Table 10 is presented in the Statement of Basis

(i) The permittee shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged, the permittee shall comply with the requirements specified in §63.133(a)(2). .[§63.133(a)(1)]

(ii) The permittee shall comply with the requirements in §63.133(b), (g) and (h) and shall operate and maintain the emission control technique listed in §63.133(a)(2)(i). [§63.133(a)(2)]

(A) A fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device. .[§63.133(a)(2)(i)]

(3) If the permittee elects to comply with the requirements of §63.133(a)(2)(i), the fixed roof shall meet the requirements of §63.133(b)(1).[§63.133(b)]

(i) The fixed-roof shall meet the following requirements: .[§63.133(b)(1)]

(A)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 §63.1366(h), §63.1367(f), and §63.1368(g)(2)(iii) and (ix) of this subpart. .[§63.133(b)(1)(i) and §63.1362(d)(16)]

(B) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. .[§63.133(b)(1)(ii)]

(4) The control device shall be designed, operated, and inspected in accordance with the requirements of §63.139 of this subpart. .[§63.133(b)(2)]

(5) Except as provided in §63.133(b)(4), the closed-vent system shall be inspected in accordance with the requirements of §63.148 of this subpart. .[§63.133(b)(3)]
(6) Each wastewater tank shall be inspected for control equipment failures as defined in§63.133(g)(1) according to the schedule in §63.133(g)(2) and (g)(3). .[§63.133(g)]
  (i) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in §63.133(g)(1)(ix). .[§63.133(g)(1)]
    (A) A gasket, joint, lid, cover, or door has a crack or gap, or is broken. [§63.133(g)(1)(ix)]
  (ii) The permittee shall inspect for the control equipment failures in §63.133(g)(1)(ix) initially, and semi-annually thereafter. .[§63.133(g)(3)]
(7) Except as provided in §63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 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 this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the permittee may utilize up to 2 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 vessel will be emptied as soon as practical. .[§63.133(h)]
(8) The permittee shall treat the wastewater stream or residual in a unit identified in, and complying with, §63.138(h)(1). These units are exempt from the design evaluation or performance tests requirements specified in §63.138(a)(3) and §63.138(j) of this subpart, and from the monitoring requirements specified in §63.132(a)(2)(iii) and §63.132(b)(3)(iii) of this subpart, as well as recordkeeping and reporting requirements associated with monitoring and performance tests. .[§63.138(h)]
  (i) The wastewater stream 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; .[§63.138(h)(1)]
(9) *Residuals.* For each residual removed from a Group 1 wastewater stream, the permittee shall control for air emissions by complying with §§63.133–137 of this subpart and by complying with §63.138(k)(4). .[§63.138(k)]
  (i) Comply with the requirements for RCRA treatment options specified in §63.138(h) of this subpart. .[§63.138(k)(4)]

The provisions of §63.1366, §63.1367, and §63.1368 are not included in this permit condition because the wastewater tanks are controlled by the RCRA Incinerators and are therefore exempt per §63.1362(l)(2).

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-001

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Compliance Provisions

Compliance Requirements:

1. Compliance dates [40 CFR 63.1206(a)]
  a) Compliance dates for incinerators that burn hazardous waste [40 CFR 63.1206(a)(1)]
    i) Compliance date for standards under §§63.1219 [40 CFR 63.1206(a)(1)(ii)]

1) Compliance dates for existing sources. You must comply with the emission standards under §§63.1219 and the other requirements of this subpart no later than the compliance date, October 14, 2008, unless the Administrator grants you an extension of time under §63.6(i) or §63.1213. [40 CFR 63.1206(a)(1)(ii)(A)]

b) Early compliance. If you choose to comply with the emission standards of this subpart prior to the dates specified in §63.1206(a)(1), your compliance date is the earlier of the date you postmark the Notification of Compliance under §63.1207(j)(1) or the dates specified in §63.1206(a)(1). [40 CFR 63.1206(a)(3)]

2. Compliance with standards [40 CFR 63.1206(b)]

a) Applicability. The emission standards and operating requirements set forth in this subpart apply at all times except: [40 CFR 63.1206(b)(1)]

i) During periods of startup, shutdown, and malfunction; and [40 CFR 63.1206(b)(1)(i)]

ii) When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and you have documented in the operating record that you are complying with all otherwise applicable requirements and standards promulgated under authority of Sections 112 or 129 of the Clean Air Act in lieu of the emission standards under §63.1219, the monitoring and compliance standards of this section and §63.1209, except the modes of operation requirements of §63.1209(q); and the notification, reporting, and recordkeeping requirements of §§63.1210 and 63.1211. [40 CFR 63.1206(b)(1)(ii)]

b) Methods for determining compliance. The Administrator will determine compliance with the emission standards of this subpart as provided by §63.6(f)(2). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirements of §§63.6(f)(2)(iii)(B) and 63.7(e)(1) to conduct performance testing under representative operating conditions. [40 CFR 63.1206(b)(2)]

c) Finding of compliance. The Administrator will make a finding concerning compliance with the emission standards and other requirements of this subpart as provided by §63.6(f)(3). [40 CFR 63.1206(b)(3)]

d) Extension of compliance with emission standards. The Administrator may grant an extension of compliance with the emission standards of this subpart as provided by §§63.6(i) and 63.1213. [40 CFR 63.1206(b)(4)]

e) Changes in design, operation, or maintenance [40 CFR 63.1206(b)(5)]

i) Changes that may adversely affect compliance. If you plan to change (as defined in §63.1206(b)(5)(iii)) the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS: [40 CFR 63.1206(b)(5)(i)]

1) Notification. You must notify the Administrator at least 60 days prior to the change, unless you document circumstances that dictate that such prior notice is not reasonably feasible. The notification must include: [40 CFR 63.1206(b)(5)(i)(A)]

a) A description of the changes and which emission standards may be affected; and [40 CFR 63.1206(b)(5)(i)(A)(1)]

b) A comprehensive performance test schedule and test plan under the requirements of §63.1207(f) that will document compliance with the affected emission standard(s); [40 CFR 63.1206(b)(5)(i)(A)(2)]

2) Performance test. You must conduct a comprehensive performance test under the requirements of §§63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under

§63.1209, and submit to the Administrator a Notification of Compliance under §§63.1207(j) and 63.1210(d); and[40 CFR 63.1206(b)(5)(i)(B)]

3) Restriction on waste burning. [40 CFR 63.1206(b)(5)(i)(C)]
   a) Except as provided by paragraph §63.1206(b)(5)(i)(C)(2), after the change and prior to submitting the notification of compliance, you must not burn hazardous waste for more than a total of 720 hours (renewable at the discretion of the Administrator) and only for the purposes of pretesting or comprehensive performance testing. Pretesting is defined at §63.1207(h)(2)(i) and (ii). [40 CFR 63.1206(b)(5)(i)(C)(1)]
   b) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements. [40 CFR 63.1206(b)(5)(i)(C)(2)]

ii) Changes that will not affect compliance. If you determine that a change will not adversely affect compliance with the emission standards or operating requirements, you must document the change in the operating record upon making such change. You must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and start-up, shutdown, and malfunction plan to reflect these changes. [40 CFR 63.1206(b)(5)(ii)]

iii) Definition of "change." For purposes of paragraph §63.1206(b)(5), "change" means any change in design, operation, or maintenance practices that were documented in the comprehensive performance test plan, Notification of Compliance, or startup, shutdown, and malfunction plan. [40 CFR 63.1206(b)(5)(iii)]

3. Applicability of particulate matter and opacity standards during particulate matter CEMS correlation tests. [40 CFR 63.1206(b)(8)]
   a) Any particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 of this chapter applicable to a hazardous waste combustor do not apply while you conduct particulate matter continuous emissions monitoring system (CEMS) correlation tests under the conditions of paragraphs §63.1206(b)(8)(iii) through (vii). [40 CFR 63.1206(b)(8)(i)]
   b) Any permit or other emissions or operating parameter limits or conditions, including any limitation on workplace practices, that are applicable to hazardous waste combustors to ensure compliance with any particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 of this chapter do not apply while you conduct particulate matter CEMS correlation tests under the conditions of paragraphs §63.1206(b)(8)(iii) through (vii). [40 CFR 63.1206(b)(8)(ii)]
   c) For the provisions of this section to apply, you must: [40 CFR 63.1206(b)(8)(iii)]
      i) Develop a particulate matter CEMS correlation test plan that includes the following information. This test plan may be included as part of the comprehensive performance test plan required under §§63.1207(e) and (f): [40 CFR 63.1206(b)(8)(iii)(A)]
         a) Number of test conditions and number of runs for each test condition; [40 CFR 63.1206(b)(8)(iii)(A)(1)]
         b) Target particulate matter emission level for each test condition; [40 CFR 63.1206(b)(8)(iii)(A)(2)]
         c) How you plan to modify operations to attain the desired particulate matter emission levels; and [40 CFR 63.1206(b)(8)(iii)(A)(3)]

d) Anticipated normal particulate matter emission levels; and [40 CFR 63.1206(b)(8)(iii)(A)(4)]

ii) Submit the test plan to the Administrator for approval at least 90 calendar days before the correlation test is scheduled to be conducted. [40 CFR 63.1206(b)(8)(iii)(B)]

d) The Administrator will review and approve/disapprove the correlation test plan under the procedures for review and approval of the site-specific test plan provided by §63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified by §63.7(c)(3)(i), the plan is considered approved, unless the Administrator has requested additional information. [40 CFR 63.1206(b)(8)(iv)]

e) The particulate matter and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for a correlation test, including all runs of all test conditions, unless more time is approved by the Administrator. [40 CFR 63.1206(b)(8)(v)]

f) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after you modify operations to attain the desired particulate matter emissions concentrations, unless you document in the correlation test plan that a longer period of conditioning is appropriate. [40 CFR 63.1206(b)(8)(vi)]

g) You must return to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed. [40 CFR 63.1206(b)(8)(vii)]

4. Calculation of hazardous waste residence time. You must calculate the hazardous waste residence time and include the calculation in the performance test plan under §63.1207(f) and the operating record. You must also provide the hazardous waste residence time in the Documentation of Compliance under §63.1211(c) and the Notification of Compliance under §§63.1207(j) and 63.1210(d). [40 CFR 63.1206(b)(11)]

5. Documenting compliance with the standards based on performance testing. [40 CFR 63.1206(b)(12)]

a) You must conduct a minimum of three runs of a performance test required under §63.1207 to document compliance with the emission standards of this subpart. [40 CFR 63.1206(b)(12)(i)]

b) You must document compliance with the emission standards based on the arithmetic average of the emission results of each run, except that you must document compliance with the destruction and removal efficiency standard for each run of the comprehensive performance test individually. [40 CFR 63.1206(b)(12)(ii)]

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-002

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Operating Requirements

Operating Requirements

1. Operating requirements [40 CFR 63.1206(c)]

a) General. [40 CFR 63.1206(c)(1)]

i) You must operate only under the operating requirements specified in the Documentation of Compliance under §63.1211(c) or the Notification of Compliance under §§63.1207(j) and 63.1210(d), except: [40 CFR 63.1206(c)(1)(i)]

1) During performance tests under approved test plans according to §63.1207(e), (f), and (g), and [40 CFR 63.1206(c)(1)(i)(A)]

2) Under the conditions of paragraph §63.1206(b)(1)(i) or (ii); [40 CFR 63.1206(c)(1)(i)(B)]

ii) The Documentation of Compliance and the Notification of Compliance must contain operating requirements including, but not limited to, the operating requirements in this section and §63.1209[40 CFR 63.1206(c)(1)(i)(A)(ii)]

iii) Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of this subpart; [40 CFR 63.1206(c)(1)(i)(A)(iii)]

iv) Operating requirements in the Notification of Compliance are applicable requirements for purposes of parts 70 and 71 of this chapter; [40 CFR 63.1206(c)(1)(i)(A)(iv)]

v) The operating requirements specified in the Notification of Compliance will be incorporated in the title V permit. [40 CFR 63.1206(c)(1)(i)(A)(v)]

b) Startup, shutdown, and malfunction plan. [40 CFR 63.1206(c)(2)]

i) You are subject to the startup, shutdown, and malfunction plan requirements of §63.6(e)(3). [40 CFR 63.1206(c)(2)(i)]

ii) You must identify in the plan a projected oxygen correction factor based on normal operations to use during periods of startup and shutdown. [40 CFR 63.1206(c)(2)(iii)]

iii) You must record the plan in the operating record. [40 CFR 63.1206(c)(2)(iv)]

iv) Operating under the startup, shutdown, and malfunction plan. [40 CFR 63.1206(c)(2)(v)]

1) Compliance with AWFCO requirements during malfunctions. [40 CFR 63.1206(c)(2)(v)(A)]

a) During malfunctions, the automatic waste feed cutoff requirements of §63.1206(c)(3) continue to apply, except for paragraphs §63.1206(c)(3)(v) and (c)(3)(vi). If you exceed a part 63, Subpart EEE, of this chapter emission standard monitored by a CEMS or COMs or operating limit specified under §63.1209, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed, except as provided by paragraph §63.1206(c)(3)(viii). If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible. [40 CFR 63.1206(c)(2)(v)(A)(1)]

b) Although the automatic waste feed cutoff requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit specified under §63.1209 is not a violation of this subpart if you take the corrective measures prescribed in the startup, shutdown, and malfunction plan. [40 CFR 63.1206(c)(2)(v)(A)(2)]

c) Excessive exceedances during malfunctions. For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber during a 60-day block period, you must: [40 CFR 63.1206(c)(2)(v)(A)(3)]

i) Within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and [40 CFR 63.1206(c)(2)(v)(A)(3)(i)]

ii) Record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report required under §63.10(e)(3). [40 CFR 63.1206(c)(2)(v)(A)(3)(ii)]

2) Compliance with AWFCO requirements when burning hazardous waste during startup and shutdown. [40 CFR 63.1206(c)(2)(v)(B)]
   a) If you feed hazardous waste during startup or shutdown, you must include waste feed restrictions, and other appropriate operating conditions and limits in the startup, shutdown, and malfunction plan. [40 CFR 63.1206(c)(2)(v)(B)(1)]
   b) You must interlock the operating limits you establish under paragraph §63.1206(c)(2)(v)(B)(1) with the automatic waste feed cutoff system required under §63.1206(c)(3), except for paragraphs §63.1206(c)(3)(v) and (c)(3)(vi). [40 CFR 63.1206(c)(2)(v)(B)(2)]
   c) When feeding hazardous waste during startup or shutdown, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed if you exceed the operating limits you establish under paragraph §63.1206(c)(2)(v)(B)(1), except as provided by paragraph §63.1206(c)(3)(viii). [40 CFR 63.1206(c)(2)(v)(B)(3)]
   d) Although the automatic waste feed cutoff requirements of this paragraph apply during startup and shutdown, an exceedance of an emission standard or operating limit is not a violation of this subpart if you comply with the operating procedures prescribed in the startup, shutdown, and malfunction plan. [40 CFR 63.1206(c)(2)(v)(B)(4)]

c) Automatic waste feed cutoff (AWFCO) [40 CFR 63.1206(c)(3)]
   i) General. Upon the compliance date, you must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by paragraph §63.1206(c)(3)(viii): [40 CFR 63.1206(c)(3)(i)]
      1) When any of the following are exceeded: Operating parameter limits specified under §63.1209; an emission standard monitored by a CEMS; and the allowable combustion chamber pressure; [40 CFR 63.1206(c)(3)(i)(A)]
      2) When the span value of any CMS detector, except a CEMS, is met or exceeded; [40 CFR 63.1206(c)(3)(i)(B)]
      3) Upon malfunction of a CMS monitoring an operating parameter limit specified under §63.1209 or an emission level; or[40 CFR 63.1206(c)(3)(i)(C)]
      4) When any component of the automatic waste feed cutoff system fails. [40 CFR 63.1206(c)(3)(i)(D)]
   ii) Ducting of combustion gases. During an AWFCO, you must continue to duct combustion gasses to the air pollution control system while hazardous waste remains in the combustion chamber. [40 CFR 63.1206(c)(3)(ii)]
   iii) Restarting waste feed. You must continue to monitor during the cutoff the operating parameters for which limits are established under §63.1209 and the emissions required under that section to be monitored by a CEMS, and you must not restart the hazardous waste feed until the operating parameters and emission levels are within the specified limits. [40 CFR 63.1206(c)(3)(iii)]
   iv) Failure of the AWFCO system. If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of a parameter required to be interlocked with the AWFCO system under paragraph §63.1206(c)(3)(i), you have failed to comply with the AWFCO requirements of paragraph §63.1206(c)(3). If an equipment or other failure prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible. [40 CFR 63.1206(c)(3)(iv)]

v) Corrective measures. If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber you must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the operating record. [40 CFR 63.1206(c)(3)(v)]

vi) Excessive exceedance reporting. [40 CFR 63.1206(c)(3)(vi)]

1) For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber during a 60-day block period, you must submit to the Administrator a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken. [40 CFR 63.1206(c)(3)(vi)(A)]

2) On a case-by-case basis, the Administrator may require excessive exceedance reporting when fewer than 10 exceedances occur during a 60-day block period. [40 CFR 63.1206(c)(3)(vi)(B)]

vii) Testing. The AWFCO system and associated alarms must be tested at least weekly to verify operability, unless you document in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, you must conduct operability testing at least monthly. You must document and record in the operating record AWFCO operability test procedures and results. [40 CFR 63.1206(c)(3)(vi)(B)(vii)]

viii) Ramping down waste feed. [40 CFR 63.1206(c)(3)(vi)(B)(viii)]

1) You may ramp down the waste feedrate of pumpable hazardous waste over a period not to exceed one minute, except as provided by paragraph §63.1206(c)(3)(viii)(B). If you elect to ramp down the waste feed, you must document ramp down procedures in the operating and maintenance plan. The procedures must specify that the ramp down begins immediately upon initiation of automatic waste feed cutoff and the procedures must prescribe a bona fide ramping down. If an emission standard or operating limit is exceeded during the ramp down, you have failed to comply with the emission standards or operating requirements of this subpart. [40 CFR 63.1206(c)(3)(vi)(B)(viii)(A)]

2) If the automatic waste feed cutoff is triggered by an exceedance of any of the following operating limits, you may not ramp down the waste feed cutoff: Minimum combustion chamber temperature, maximum hazardous waste feedrate, or any hazardous waste firing system operating limits that may be established for your combustor. [40 CFR 63.1206(c)(3)(vi)(B)(viii)(B)]

d) Combustion system leaks. [40 CFR 63.1206(c)(5)]

i) Combustion system leaks of hazardous air pollutants must be controlled by: [40 CFR 63.1206(c)(5)(i)]

1) Keeping the combustion zone sealed to prevent combustion system leaks. [40 CFR 63.1206(c)(5)(i)(A)]

ii) You must specify in the performance test workplan and Notification of Compliance the method that will be used to control combustion system leaks. [40 CFR 63.1206(c)(5)(ii)]

e) Operator training and certification. [40 CFR 63.1206(c)(6)]

i) You must establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. Such persons include, but are not limited to, chief facility operators, control room operators, continuous monitoring system operators, persons that sample and analyze

feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual. Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the "certification" for personnel, except that, for control room operators, the training and certification program shall be as specified in paragraphs §63.1206(c)(6)(iii) through (c)(6)(vi). [40 CFR 63.1206(c)(6)(i)]

ii) You must ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified control room operator must be on duty at the site at all times the source is in operation. [40 CFR 63.1206(c)(6)(ii)]

iii) Hazardous waste incinerator control room operators must: [40 CFR 63.1206(c)(6)(iii)]

1) Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of paragraph §63.1206(c)(6)(v), or[40 CFR 63.1206(c)(6)(iii)(A)]

iv) Site-specific, source developed and implemented training programs for control room operators must include the following elements: [40 CFR 63.1206(c)(6)(v)]

1) Training on the following subjects: [40 CFR 63.1206(c)(6)(v)(A)]

a) Environmental concerns, including types of emissions; [40 CFR 63.1206(c)(6)(v)(A)(1)]

b) Basic combustion principles, including products of combustion; [40 CFR 63.1206(c)(6)(v)(A)(2)]

c) Operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures; [40 CFR 63.1206(c)(6)(v)(A)(3)]

d) Combustion controls and continuous monitoring systems; [40 CFR 63.1206(c)(6)(v)(A)(4)]

e) Operation of air pollution control equipment and factors affecting performance; [40 CFR 63.1206(c)(6)(v)(A)(5)]

f) Inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices; [40 CFR 63.1206(c)(6)(v)(A)(6)]

g) Actions to correct malfunctions or conditions that may lead to malfunction; [40 CFR 63.1206(c)(6)(v)(A)(7)]

h) Residue characteristics and handling procedures; and[40 CFR 63.1206(c)(6)(v)(A)(8)]

i) Applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards; and [40 CFR 63.1206(c)(6)(v)(A)(9)]

2) An examination designed and administered by the instructor; and [40 CFR 63.1206(c)(6)(v)(B)]

3) Written material covering the training course topics that may serve as reference material following completion of the course. [40 CFR 63.1206(c)(6)(v)(C)]

v) To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph (c)(6)(v) of this section, control room operators must complete an annual review or refresher course covering, at a minimum, the following topics: [40 CFR 63.1206(c)(6)(vi)]

1) Update of regulations; [40 CFR 63.1206(c)(6)(vi)(A)]

2) Combustor operation, including startup and shutdown procedures, waste firing, and residue handling; [40 CFR 63.1206(c)(6)(vi)(B)]
3) Inspection and maintenance; [40 CFR 63.1206(c)(6)(vi)(C)]
4) Responses to malfunctions or conditions that may lead to malfunction; and [40 CFR 63.1206(c)(6)(vi)(D)]
5) Operating problems encountered by the operator. [40 CFR 63.1206(c)(6)(vi)(E)]

vi) You must record the operator training and certification program in the operating record. [40 CFR 63.1206(c)(6)(vii)]

f) Operation and maintenance plan [40 CFR 63.1206(c)(7)]

i) You must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants. [40 CFR 63.1206(c)(7)(i)]

ii) The plan must prescribe how you will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test. [40 CFR 63.1206(c)(7)(ii)]

iii) This plan ensures compliance with the operation and maintenance requirements of §63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions. [40 CFR 63.1206(c)(7)(iii)]

iv) You must record the plan in the operating record. [40 CFR 63.1206(c)(7)(iv)]

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-003

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Monitoring Requirements

Monitoring:

1. Petitions to use CEMS for other standards. You may petition the Administrator to use CEMS for compliance monitoring for particulate matter, mercury, semivolatile metals, low volatile metals, and hydrogen chloride and chlorine gas under §63.8(f) in lieu of compliance with the corresponding operating parameter limits under this section. [40 CFR 63.1209(a)(5)]
2. Other continuous monitoring systems (CMS). [40 CFR 63.1209(b)]

(1) You must use CMS to document compliance with the applicable operating parameter limits under this section. [40 CFR 63.1209(b)(1)]

(2) Except as specified in paragraphs §63.1209(b)(2)(i) and (ii), you must install and operate continuous monitoring systems other than CEMS in conformance with §63.8(c)(3) that requires you, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system: [40 CFR 63.1209(b)(2)]

(i) Calibration of thermocouples and pyrometers. The calibration of thermocouples must be verified at a frequency and in a manner consistent with manufacturer specifications, but no less frequent than once per year. You must operate and maintain optical pyrometers in accordance with manufacturer specifications unless otherwise approved by the Administrator. You must calibrate optical pyrometers in accordance with the frequency and procedures recommended by the manufacturer, but no less frequent than once per year, unless otherwise approved by the Administrator. And, [40 CFR 63.1209(b)(2)(i)]

(3) CMS must sample the regulated parameter without interruption, and evaluate the detector response at least once each 15 seconds, and compute and record the average values at least every 60 seconds. [40 CFR 63.1209(b)(3)]

(4) The span of the non-CEMS CMS detector must not be exceeded. You must interlock the span limits into the automatic waste feed cutoff system required by §63.1206(c)(3). [40 CFR 63.1209(b)(4)]

(5) Calculation of rolling averages [40 CFR 63.1209(b)(5)]

(i) Calculation of rolling averages initially. Continuous monitoring systems must begin recording one-minute average values by 12:01 a.m., hourly rolling average values by 1:01 a.m., and twelve-hour rolling averages by 12:01 p.m., for those sources that come into compliance on the regulatory compliance date. Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute, hourly rolling average, and 12-hour rolling average values within 60 seconds, 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), and 720 minutes (when 720 one-minute values will be available for calculating the initial 12-hour hourly rolling average) respectively, from the time at which compliance begins. [40 CFR 63.1209(b)(5)(i)]

(ii) Calculation of rolling averages upon intermittent operations. You must ignore periods of time when one-minute values are not available for calculating rolling averages. When one-minute values become available again, the first one-minute value is added to the previous one-minute values to calculate rolling averages. [40 CFR 63.1209(b)(5)(ii)]

(iii) Calculation of rolling averages when the hazardous waste feed is cutoff. [40 CFR 63.1209(b)(5)(iii)]

(A) Except as provided by paragraph §63.1209(b)(5)(iii)(B), you must continue monitoring operating parameter limits with a CMS when the hazardous waste feed is cutoff if the source is operating. You must not resume feeding hazardous waste if an operating parameter exceeds its limit. [40 CFR 63.1209(b)(5)(iii)(A)]

(B) You are not subject to the CMS requirements of this subpart during periods of time you meet the requirements of §63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when you are not burning hazardous waste). [40 CFR 63.1209(b)(5)(iii)(B)]

3. Analysis of feedstreams [40 CFR 63.1209(c)]

(1) General. Prior to feeding the material, you must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided by this section. [40 CFR 63.1209(c)(1)]

(2) Feedstream analysis plan. You must develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify at a minimum: [40 CFR 63.1209(c)(2)]

i) The parameters for which you will analyze each feedstream to ensure compliance with the operating parameter limits of this section; [40 CFR 63.1209(c)(2)(i)]

ii) Whether you will obtain the analysis by performing sampling and analysis or by other methods, such as using analytical information obtained from others or using other published or documented data or information; [40 CFR 63.1209(c)(2)(ii)]

iii) How you will use the analysis to document compliance with applicable feedrate limits; [40 CFR 63.1209(c)(2)(iii)]

iv) The test methods which you will use to obtain the analyses; [40 CFR 63.1209(c)(2)(iv)]

v) The sampling method which you will use to obtain a representative sample of each feedstream to be analyzed using sampling methods described in appendix IX, part 266 of this chapter, or an equivalent method; and [40 CFR 63.1209(c)(2)(v)]

vi) The frequency with which you will review or repeat the initial analysis of the feedstream to ensure that the analysis is accurate and up to date. [40 CFR 63.1209(c)(2)(vi)]

(3) Review and approval of analysis plan. You must submit the feedstream analysis plan to the Administrator for review and approval, if requested. [40 CFR 63.1209(c)(3)]

(4) Compliance with feedrate limits. To comply with the applicable feedrate limits of this section, you must monitor and record feedrates as follows: [40 CFR 63.1209(c)(4)]

i) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method; [40 CFR 63.1209(c)(4)(i)]

ii) Determine and record the mass or volume flowrate of each feedstream by a CMS. If you determine flowrate of a feedstream by volume, you must determine and record the density of the feedstream by sampling and analysis (unless you report the constituent concentration in units of weight per unit volume (e.g., mg/l)); and [40 CFR 63.1209(c)(4)(ii)]

iii) Calculate and record the mass feedrate of the parameter per unit time. [40 CFR 63.1209(c)(4)(iii)]

(5) Waiver of monitoring of constituents in certain feedstreams. You are not required to monitor levels of metals or chlorine in the following feedstreams to document compliance with the feedrate limits under this section provided that you document in the comprehensive performance test plan the expected levels of the constituent in the feedstream and account for those assumed feedrate levels in documenting compliance with feedrate limits: natural gas, process air, and feedstreams from vapor recovery systems. [40 CFR 63.1209(c)(5)]

4. Performance evaluations. [40 CFR 63.1209(d)]

(1) The requirements of §§63.8(d) (Quality control program) and (e) (Performance evaluation of continuous monitoring systems) apply, except that you must conduct performance evaluations of components of the CMS under the frequency and procedures applicable to performance tests as provided by §63.1207. [40 CFR 63.1209(d)(1)]

(2) You must comply with the quality assurance procedures for CEMS prescribed in the appendix to this subpart. [40 CFR 63.1209(d)(2)]

5. Conduct of monitoring. The provisions of §63.8(b) apply. [40 CFR 63.1209(e)]

6. Operation and maintenance of continuous monitoring systems. The provisions of §63.8(c) apply except: [40 CFR 63.1209(f)]

(1) Section 63.8(c)(3). The requirements of §63.1211(c), that requires CMSs to be installed, calibrated, and operational on the compliance date, shall be complied with instead of Section 63.8(c)(3); [40 CFR 63.1209(f)(1)]

(2) Section 63.8(c)(4)(ii). The performance specifications for carbon monoxide, hydrocarbon, and oxygen CEMSs in subpart B, part 60 of this chapter that requires detectors to measure the sample concentration at least once every 15 seconds for calculating an average emission rate once every 60 seconds shall be complied with instead of Section 63.8(c)(4)(ii); and [40 CFR 63.1209(f)(2)]

7. Alternative monitoring requirements other than continuous emissions monitoring systems (CEMS) [40 CFR 63.1209(g)]

(1) Requests to use alternatives to operating parameter monitoring requirements. [40 CFR 63.1209(g)(1)]

i) You may submit an application to the Administrator under this paragraph for approval of alternative operating parameter monitoring requirements to document compliance with

the emission standards of this subpart. For requests to use additional CEMS, however, you must use paragraph §63.1209(a)(5) and §63.8(f). Alternative requests to operating parameter monitoring requirements that include unproven monitoring methods may not be made under this paragraph and must be made under §63.8(f). [40 CFR 63.1209(g)(1)(i)]

ii) You may submit an application to waive an operating parameter limit specified in this section based on documentation that neither that operating parameter limit nor an alternative operating parameter limit is needed to ensure compliance with the emission standards of this subpart. [40 CFR 63.1209(g)(1)(ii)]

iii) You must comply with the following procedures for applications submitted under paragraphs §63.1209(g)(1)(i) and (ii): [40 CFR 63.1209(g)(1)(iii)]

(A) Timing of the application. You must submit the application to the Administrator not later than with the comprehensive performance test plan. [40 CFR 63.1209(g)(1)(iii)(A)]

(B) Content of the application. You must include in the application: [40 CFR 63.1209(g)(1)(iii)(B)]

a) Data or information justifying your request for an alternative monitoring requirement (or for a waiver of an operating parameter limit), such as the technical or economic infeasibility or the impracticality of using the required approach; [40 CFR 63.1209(g)(1)(iii)(B)(1)]

b) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach/technique, the averaging period for the limit, and how the limit is to be calculated; and [40 CFR 63.1209(g)(1)(iii)(B)(2)]

c) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard, or that it is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable. [40 CFR 63.1209(g)(1)(iii)(B)(3)]

(C) Approval of request to use an alternative monitoring requirement or waive an operating parameter limit. The Administrator will notify you of approval or intention to deny approval of the request within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that you submit. The Administrator will not approve an alternative monitoring request unless the alternative monitoring requirement provides equivalent or better assurance of compliance with the relevant emission standard, or is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable. Before disapproving any request, the Administrator will notify you of the Administrator's intention to disapprove the request together with: [40 CFR 63.1209(g)(1)(iii)(C)]

a) Notice of the information and findings on which the intended disapproval is based; and [40 CFR 63.1209(g)(1)(iii)(C)(1)]

b) Notice of opportunity for you to present additional information to the Administrator before final action on the request. At the time the Administrator notifies you of intention to disapprove the request, the Administrator will specify how much time you will have after being notified of the intended disapproval to submit the additional information. [40 CFR 63.1209(g)(1)(iii)(C)(2)]

(D) Responsibility of owners and operators. You are responsible for ensuring that you submit any supplementary and additional information supporting your application in a timely manner to enable the Administrator to consider your application during review of the comprehensive performance test plan. Neither your submittal of an application, nor the Administrator's failure to approve or disapprove the application, relieves you of the responsibility to comply with the provisions of this subpart. [40 CFR 63.1209(g)(1)(iii)(D)]

iv) Dual standards that incorporate the interim standards for HAP metals [40 CFR 63.1209(g)(1)(iv)]

(A) Semivolatile and low volatile metals. You may petition the Administrator to waive a feedrate operating parameter limit under paragraph §63.1209(n)(2) for either the emission standards expressed in a thermal emissions format or the interim standards based on documentation that the feedrate operating parameter limit is not needed to ensure compliance with the relevant standard on a continuous basis. [40 CFR 63.1209(g)(1)(iv)(A)]

(B) Mercury. You may petition the Administrator to waive a feedrate operating parameter limit under paragraph §63.1209(l)(1) for either the feed concentration standard under §§63.1220(a)(2)(i) and (b)(2)(i) or the interim standards based on documentation that the feedrate operating parameter limit is not needed to ensure compliance with the relevant standard on a continuous basis. [40 CFR 63.1209(g)(1)(iv)(B)]

(2) Administrator's discretion to specify additional or alternative requirements. The Administrator may determine on a case-by-case basis at any time that you may need to limit additional or alternative operating parameters or that alternative approaches to establish limits on operating parameters may be necessary to document compliance with the emission standards of this subpart. [40 CFR 63.1209(g)(2)]

8. Reduction of monitoring data. The provisions of §63.8(g) apply. [40 CFR 63.1209(h)]

9. When an operating parameter is applicable to multiple standards. Paragraphs §63.1209(j) through (p) require you to establish limits on operating parameters based on comprehensive performance testing to ensure you maintain compliance with the emission standards of this subpart. For several parameters, you must establish a limit for the parameter to ensure compliance with more than one emission standard. An example is a limit on minimum combustion chamber temperature to ensure compliance with both the DRE standard of paragraph §63.1209(j) and the dioxin/furan standard of paragraph §63.1209(k). If the performance tests for such standards are not performed simultaneously, the most stringent limit for a parameter derived from independent performance tests applies. [40 CFR 63.1209(i)]

10. Operating under different modes of operation. If you operate under different modes of operation, you must establish operating parameter limits for each mode. You must document in the operating record when you change a mode of operation and begin complying with the operating limits for an alternative mode of operation. [40 CFR 63.1209(q)]

(1) Operating under otherwise applicable standards after the hazardous waste residence time has transpired. As provided by §63.1206(b)(1)(ii), you may operate under otherwise applicable requirements promulgated under Sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of this subpart. [40 CFR 63.1209(q)(1)]

i) The otherwise applicable requirements promulgated under Sections 112 and 129 of the Clean Air Act are applicable requirements under this subpart. [40 CFR 63.1209(q)(1)(i)]

ii) You must specify the otherwise applicable requirements as a mode of operation in your Documentation of Compliance under §63.1211(c), your Notification of Compliance under §63.1207(j), and your title V permit application. These requirements include the

otherwise applicable requirements governing emission standards, monitoring and compliance, and notification, reporting, and recordkeeping. [40 CFR 63.1209(q)(1)(ii)]

(2) Calculating rolling averages under different modes of operation. When you transition to a different mode of operation, you must calculate rolling averages as follows: [40 CFR 63.1209(q)(2)]

i) Retrieval approach. Calculate rolling averages anew using the continuous monitoring system values previously recorded for that mode of operation; or [40 CFR 63.1209(q)(2)(i)]

ii) Start anew. Calculate rolling averages anew without considering previous recordings. [40 CFR 63.1209(q)(2)(ii)]

(A) Rolling averages must be calculated as the average of the available one-minute values for the parameter until enough one-minute values are available to calculate hourly or 12-hour rolling averages, whichever is applicable to the parameter. [40 CFR 63.1209(q)(2)(ii)(A)]

(B) You may not transition to a new mode of operation using this approach if the most recent operation in that mode resulted in an exceedance of an applicable emission standard measured with a CEMS or operating parameter limit prior to the hazardous waste residence time expiring; or [40 CFR 63.1209(q)(2)(ii)(B)]

iii) Seamless transition. Continue calculating rolling averages using data from the previous operating mode provided that both the operating limit and the averaging period for the parameter are the same for both modes of operation. [40 CFR 63.1209(q)(2)(iii)]

11. Averaging periods. The averaging periods specified in this section for operating parameters are not to- exceed averaging periods. You may elect to use shorter averaging periods. For example, you may elect to use a 1-hour rolling average rather than the 12-hour rolling average specified in paragraph §63.1209(l)(1)(i) for mercury. [40 CFR 63.1209(r)]

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-004

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Notification Requirements

Notification Requirements:

1. Summary of requirements. [40 CFR 63.1210(a)]

a) You must submit the following notifications to the Administrator: [40 CFR 63.1210(a)(1)]

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE of this part.
63.9(d)	Notification that you re subject to special compliance requirements.
63.9(j)	Notification and documentation of any change in information already provided under §63.9.
63.1206(b)(5)(i)	Notification of changes in design, operation, or maintenance.
63.1206(c)(9)(v)	Notification of excessive particulate matter detection system exceedances.
63.1207(e), 63.9(e), 63.9(g)(1) and (3)	Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan.

63.1210(b)	Notification of intent to comply.
63.1210(d), 63.1207(j), 63.1207(l), 63.9(h), 63.10(d)(2), and 63.10(e)(2)	Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations.

b) You must submit the following notifications to the Administrator if you request or elect to comply with alternative requirements: [40 CFR 63.1210(a)(2)]

Reference	Notification, request, petition, or application
63.9(i)	You may request an adjustment to time periods or postmark deadlines for submittal and review of required information.
63.10(e)(3)(ii)	You may request to reduce the frequency of excess emissions and CMS performance reports.
63.10(f)	You may request to waive recordkeeping or reporting requirements.
63.1206(b)(4), 63.1213, 63.6(i), and 63.9(c)	You may request an extension of the compliance date for up to one year.
63.1206(b)(5)(i)(C)	You may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting after making a change in the design or operation that could affect compliance with emission standards and prior to submitting a revised Notification of Compliance.
63.1206(b)(8)(iii)(B)	If you elect to conduct particulate matter CEMS correlation testing and wish to have federal particulate matter and opacity standards and associated operating limits waived during the testing, you must notify the Administrator by submitting the correlation test plan for review and approval.
63.1206(b)(8)(v)	You may request approval to have the particulate matter and opacity standards and associated operation limits and conditions waived for more than 96 hours for a correlation test.
63.1206(b)(14)	Owners and operations of incinerators may elect to comply with an alternative to the particulate matter standard.
63.1206(c)(2)(ii)(C)	You may request to make changes to the startup, shutdown, and malfunction plan.
63.1206(c)(5)(i)(C)	You may request an alternative means of control to provide control of combustion system leaks.
63.1206(c)(5)(i)(D)	You may request other techniques to prevent fugitive emissions without use of instantaneous pressure limits.
63.1207(c)(2)	You may request to base initial compliance on data in lieu of a comprehensive performance test.
63.1207(d)(3)	You may request more than 60 days to complete a performance test if additional time is needed for

	reasons beyond your control.
63.1207(e)(3), 63.7(h)	You may request a time extension if the Administrator fails to approve or deny your test plan.
63.1207(h)(2)	You may request to waive current operating parameter limits during pretesting for more than 720 hours.
63.1207(f)(1)(ii)(D)	You may request a reduced hazardous waste feedstream analysis for organic hazardous air pollutants if the reduced analysis continues to be representative of organic hazardous air pollutants in your hazardous waste feedstreams.
63.1207(g)(2)(v)	You may request to operate under a wider operating range for a parameter during confirmatory performance testing.
63.1207(i)	You may request up to a one year time extension for conducting a performance test (other than the initial comprehensive performance test) to consolidate testing with other state or federally-required testing.
63.1207(j)(4)	You may request more than 90 days to submit a Notification of Compliance after completing a performance test if additional time is needed for reasons beyond your control.
63.1207(l)(3)	After failure of a performance test, you may request to burn hazardous waste for more than 720 hour and for purposes other than testing or pretesting.
63.1209(a)(5), 63.8(f)	You may request: (1) Approval of alternative monitoring methods for compliance with standards that are monitored with a CEMS; and (2) approval to use a CEMS in lieu of operating parameter limits.
63.1209(g)(1)	You may request approval of: (1) Alternatives to operating parameter monitoring requirements, except for standard that you must monitor with a CEMS and except for requests to use a CEMS in lieu of operating parameter limits; or (2) a waiver of an operating parameter limit.
63.1209(l)(1)	You may request to extrapolate mercury federate limits.
63.1209(n)(2)	You may request to extrapolate semivolatile and low volatile metal federate limits.
63.1211(d)	You may request to use data compression techniques to record data on a less frequent basis than required by §63.1209.

2. Notification of compliance. [40 CFR 63.1210(d)]
   a) The Notification of Compliance status requirements of §63.9(h) apply, except that: [40 CFR 63.1210(d)(1)]

i) The notification is a Notification of Compliance, rather than compliance status; [40 CFR 63.1210(d)(1)(i)]
ii) The notification is required for the initial comprehensive performance test and each subsequent comprehensive and confirmatory performance test; and [40 CFR 63.1210(d)(1)(ii)]
iii) You must postmark the notification before the close of business on the 90th day following completion of relevant compliance demonstration activity specified in this subpart rather than the 60th day as required by §63.9(h)(2)(ii). [40 CFR 63.1210(d)(1)(iii)]

b) Upon postmark of the Notification of Compliance, the operating parameter limits identified in the Notification of Compliance, as applicable, shall be complied with, the limits identified in the Documentation of Compliance or a previous Notification of Compliance are no longer applicable. [40 CFR 63.1210(d)(2)]

c) The Notification of Compliance requirements of §63.1207(j) also apply. [40 CFR 63.1210(d)(3)]

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-005

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Recordkeeping and Reporting Requirements

Recordkeeping Requirements:

(a) Summary of reporting requirements. You must submit the following reports to the Administrator: [40 CFR 63.1211(a)]

Reference	Report
63.10(d)(4)	Compliance progress reports, if required as a condition of an extension of the compliance date granted under §63.6(i).
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports.
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports.
63.10(e)(3)	Excessive emissions and continuous monitoring system performance report and summary report.
63.1206(c)(2)(ii)(B)	Startup, shutdown, and malfunction plan.
63.1206(c)(3)(iv)	Excessive exceedances reports.
63.1206(c)(4)(iv)	Emergency safety vent opening reports.

(b) Summary of recordkeeping requirements. You must retain the following in the operating record: [40 CFR 63.1211(b)]

Reference	Document, Data, or Information
63.1200, 63.10(b) and (c)	General. Information required to document and maintain compliance with the regulations of Subpart EEE, including data recorded by CMS, and copies of all notifications, reports, plans, and other documents submitted to the Administrator.
63.1206(b)(1)(ii)	If you elect to comply with all applicable

	requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, you must document in the operating record that you are in compliance with those requirements.
63.1206(b)(5)(ii)	Documentation that a change will not adversely affect compliance with the emission standards or operating requirements.
63.1206(b)(11)	Calculation of hazardous waste residence time.
63.1206(c)(2)	Startup, shutdown, and malfunction plan.
63.1206(c)(2)(v)(A)	Documentation of your investigation and evaluation of excessive exceedances during malfunctions.
63.1206(c)(3)(v)	Corrective measures for any AWFCO that results in an exceedance of an emission standard or operating parameter limit.
63.1206(c)(3)(vii)	Documentation and results of the AWFCO operability testing.
63.1206(c)(4)(ii)	Emergency safety vent operating plan.
63.1206(c)(4)(iii)	Corrective measures for any emergency safety vent opening.
63.1206(c)(5)(ii)	Method used for control of combustion system leaks.
63.1206(c)(6)	Operating training and certification program.
63.1206(c)(7)(i)(D)	Operation and maintenance plan.
63.1206(c)(2)	Feedstream analysis plan.
63.1209(q)	Documentation of changes in modes of operation.
63.1211(c)	Documentation of compliance.

(c) Documentation of compliance. [40 CFR 63.1211(c)]

(1) By the compliance date, you must develop and include in the operating record a Documentation of Compliance. You are not subject to this requirement, however, if you submit a Notification of Compliance under §63.1207(j) prior to the compliance date. Upon inclusion of the Documentation of Compliance in the operating record, hazardous waste burning incinerators regulated under the interim standards of §§63.1203 are no longer subject to compliance with the previously applicable Notification of Compliance. [40 CFR 63.1211(c)(1)]

(2) The Documentation of Compliance must identify the applicable emission standards under this subpart and the limits on the operating parameters under §63.1209 that will ensure compliance with those emission standards. [40 CFR 63.1211(c)(2)]

(3) You must include a signed and dated certification in the Documentation of Compliance that: [40 CFR 63.1211(c)(3)]
(i) Required CEMs and CMS are installed, calibrated, and continuously operating in compliance with the requirements of this subpart; and [40 CFR 63.1211(c)(3)(i)]
(ii) Based on an engineering evaluation prepared under your direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation, and considering at a minimum the design, operation, and maintenance characteristics of the combustor and emissions control equipment, the types, quantities, and characteristics of feedstreams, and available emissions data: [40 CFR 63.1211(c)(3)(ii)]
(A)You are in compliance with the emission standards of this subpart; and [40 CFR 63.1211(c)(3)(ii)(A)]
(B) The limits on the operating parameters under §63.1209 ensure compliance with the emission standards of this subpart. [40 CFR 63.1211(c)(3)(ii)(B)]
(4) You must comply with the emission standards and operating parameter limits specified in the Documentation of Compliance. [40 CFR 63.1211(c)(4)]

(d) Data compression. You may submit a written request to the Administrator for approval to use data compression techniques to record data from CMS, including CEMS, on a frequency less than that required by §63.1209. You must submit the request for review and approval as part of the comprehensive performance test plan. [40 CFR 63.1211(d)]
(1) You must record a data value at least once each ten minutes. [40 CFR 63.1211(d)(1)]
(2) For each CEMS or operating parameter for which you request to use data compression techniques, you must recommend: [40 CFR 63.1211(d)(2)]
(i) A fluctuation limit that defines the maximum permissible deviation of a new data value from a previously generated value without requiring you to revert to recording each one-minute value. [40 CFR 63.1211(d)(2)(i)]
(A) If you exceed a fluctuation limit, you must record each one-minute value for a period of time not less than ten minutes. [40 CFR 63.1211(d)(2)(i)(A)]
(B) If neither the fluctuation limit nor the data compression limit are exceeded during that period of time, you may reinitiate recording data values on a frequency of at least once each ten minutes; and [40 CFR 63.1211(d)(2)(i)(B)]
(ii) A data compression limit defined as the closest level to an operating parameter limit or emission standard at which reduced data recording is allowed. [40 CFR 63.1211(d)(2)(ii)]
(A) Within this level and the operating parameter limit or emission standard, you must record each one minute average. [40 CFR 63.1211(d)(2)(ii)(A)]
(B) The data compression limit should reflect a level at which you are unlikely to exceed the specific operating parameter limit or emission standard, considering its averaging period, with the addition of a new one-minute average. [40 CFR 63.1211(d)(2)(ii)(B)]

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-006

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Dioxins and Furans

Emission Limitation:

1. Emission limits for existing sources. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain: [40 CFR 63.1219(a)]
   a) For dioxins and furans: [40 CFR 63.1219(a)(1)]
      i) For incinerators equipped with either a waste heat boiler or dry air pollution control system, either: [40 CFR 63.1219(a)(1)(i)]

A) Emissions in excess of 0.20 ng TEQ/dscm, corrected to 7 percent oxygen; or [40 CFR 63.1219(a)(1)(i)(A)]
B) Emissions in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures. (For purposes of compliance, operation of a wet particulate matter control device is presumed to meet the 400 °F or lower requirement); [40 CFR 63.1219(a)(1)(i)(B)]

ii) Emissions in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for incinerators not equipped with either a waste heat boiler or dry air pollution control system; [40 CFR 63.1219(a)(1)(ii)]

iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this standard; [40 CFR 63.1219(a)(1)(iii)]

2. Significant figures . The emission limits provided by paragraphs §63.1219(a) and (b) are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance. [40 CFR 63.1219(d)]

Monitoring:

1. Dioxins and furans. You must comply with the dioxin and furans emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. [40 CFR 63.1209(k)]
   a) Minimum combustion chamber temperature. [40 CFR 63.1209(k)(2)]
      i) You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under §§63.1207(e) and (f); [40 CFR 63.1209(k)(2)(i)]
      ii) You must establish a minimum hourly rolling average limit as the average of the test run averages. [40 CFR 63.1209(k)(2)(ii)]
   b) Maximum flue gas flowrate or production rate. [40 CFR 63.1209(k)(3)]
      i) As an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
      ii) You must comply with this limit on a hourly rolling average basis; [40 CFR 63.1209(k)(3)(i)]
   c) Maximum hazardous waste feedrate. [40 CFR 63.1209(k)(4)]
      i) You must establish limits on the maximum pumpable and total (pumpable and nonpumpable) hazardous waste feedrate for each location where waste is fed. [40 CFR 63.1209(k)(4)(i)]
      ii) You must establish the limits as the average of the maximum hourly rolling averages for each run. [40 CFR 63.1209(k)(4)(ii)]
      iii) You must comply with the feedrate limit(s) on a hourly rolling average basis; [40 CFR 63.1209(k)(4)(iii)]

Record Keeping and Reporting:
See Permit Condition (EU0122 through EU0124 and EU0129)-005.

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-007

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Carbon Monoxide and Hydrocarbons

Emission Limitation:

1. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain, for carbon monoxide and hydrocarbons, either: [40 CFR 63.1219(a)(5)]
   a) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph §63.1219(a)(5)(ii), you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or [40 CFR 63.1219(a)(5)(i)]
   b) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; [40 CFR 63.1219(a)(5)(ii)]
2. Significant figures . The emission limits provided by paragraphs §63.1219(a) and (b) are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance. [40 CFR 63.1219(d)]

Monitoring Requirements:

1. Continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS). [40 CFR 63.1209(a)]
   a) Carbon monoxide or hydrocarbon CEMS [40 CFR 63.1209(a)(1)]
      i) You must use either a carbon monoxide or hydrocarbon CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen. [40 CFR 63.1209(a)(1)(i)]
      ii) You must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under this subpart. However, compliance with the requirements in this section to install, calibrate, maintain and operate the PM CEMS is not required until such time that the Agency promulgates all performance specifications and operational requirements applicable to PM CEMS. [40 CFR 63.1209(a)(1)(iii)]
   b) Performance specifications. You must install, calibrate, maintain, and continuously operate the CEMS and COMS in compliance with the quality assurance procedures provided in the appendix to this subpart and Performance Specifications 1 (opacity), 4B (carbon monoxide and oxygen), and 8A (hydrocarbons) in appendix B, part 60 of this chapter. [40 CFR 63.1209(a)(2)]
   c) Carbon monoxide readings exceeding the span. [40 CFR 63.1209(a)(3)]

i) Except as provided by paragraph §63.1209(a)(3)(ii), if a carbon monoxide CEMS detects a response that results in a one-minute average at or above the 3,000 ppmv span level required by Performance Specification 4B in appendix B, part 60 of this chapter, the one-minute average must be recorded as 10,000 ppmv. The one-minute 10,000 ppmv value must be used for calculating the hourly rolling average carbon monoxide level. [40 CFR 63.1209(a)(3)(i)]

ii) Carbon monoxide CEMS that use a span value of 10,000 ppmv when one-minute carbon monoxide levels are equal to or exceed 3,000 ppmv are not subject to paragraph §63.1209(a)(3)(i). Carbon monoxide CEMS that use a span value of 10,000 are subject to the same CEMS performance and equipment specifications when operating in the range of 3,000 ppmv to 10,000 ppmv that are provided by Performance Specification 4B for other carbon monoxide CEMS, except: [40 CFR 63.1209(a)(3)(ii)]

A) Calibration drift must be less than 300 ppmv; and[40 CFR 63.1209(a)(3)(ii)(A)]

B) Calibration error must be less than 500 ppmv. [40 CFR 63.1209(a)(3)(ii)(B)]

d) Hydrocarbon readings exceeding the span. [40 CFR 63.1209(a)(4)]

i) Except as provided by paragraph §63.1209(a)(4)(ii), if a hydrocarbon CEMS detects a response that results in a one-minute average at or above the 100 ppmv span level required by Performance Specification 8A in appendix B, part 60 of this chapter, the one-minute average must be recorded as 500 ppmv. The one-minute 500 ppmv value must be used for calculating the hourly rolling average HC level. [40 CFR 63.1209(a)(4)(i)]

ii) Hydrocarbon CEMS that use a span value of 500 ppmv when one-minute hydrocarbon levels are equal to or exceed 100 ppmv are not subject to paragraph §63.1209(a)(4)(i). Hydrocarbon CEMS that use a span value of 500 ppmv are subject to the same CEMS performance and equipment specifications when operating in the range of 100 ppmv to 500 ppmv that are provided by Performance Specification 8A for other hydrocarbon CEMS, except: [40 CFR 63.1209(a)(4)(ii)]

A) The zero and high-level calibration gas must have a hydrocarbon level of between 0 and 100 ppmv, and between 250 and 450 ppmv, respectively; [40 CFR 63.1209(a)(4)(ii)(A)]

B) The strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEM measurement range and must have a resolution of 2.5 ppmv; [40 CFR 63.1209(a)(4)(ii)(B)]

C) The CEMS calibration must not differ by more than ±15 ppmv after each 24-hour period of the seven day test at both zero and high levels; [40 CFR 63.1209(a)(4)(ii)(C)]

D) The calibration error must be no greater than 25 ppmv; and[40 CFR 63.1209(a)(4)(ii)(D)]

E) The zero level, mid-level, and high level calibration gas used to determine calibration error must have a hydrocarbon level of 0–200 ppmv, 150–200 ppmv, and 350–400 ppmv, respectively. [40 CFR 63.1209(a)(4)(ii)(E)]

e) Calculation of rolling averages [40 CFR 63.1209(a)(6)]

i) Calculation of rolling averages initially. The carbon monoxide or hydrocarbon CEMS must begin recording one-minute average values by 12:01 a.m. and hourly rolling average values by 1:01 a.m., when 60 one-minute values will be available for calculating the initial hourly rolling average for those sources that come into compliance on the regulatory compliance date. Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute and hourly rolling average values within 60 seconds and 60 minutes (when 60 one-minute values will be available

for calculating the initial hourly rolling average), respectively, from the time at which compliance begins. [40 CFR 63.1209(a)(6)(i)]

ii) Calculation of rolling averages upon intermittent operations. You must ignore periods of time when one-minute values are not available for calculating the hourly rolling average. When one-minute values become available again, the first one-minute value is added to the previous 59 values to calculate the hourly rolling average. [40 CFR 63.1209(a)(6)(ii)]

iii) Calculation of rolling averages when the hazardous waste feed is cutoff. [40 CFR 63.1209(a)(6)(iii)]

A) Except as provided by paragraph §63.1209(a)(6)(iii)(B), you must continue monitoring carbon monoxide and hydrocarbons when the hazardous waste feed is cutoff if the source is operating. You must not resume feeding hazardous waste if the emission levels exceed the standard. [40 CFR 63.1209(a)(6)(iii)(A)]

B) You are not subject to the CEMS requirements of this subpart during periods of time you meet the requirements of §63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when you are not burning hazardous waste). [40 CFR 63.1209(a)(6)(iii)(B)]

f) Operating parameter limits for hydrocarbons. If you elect to comply with the carbon monoxide and hydrocarbon emission standard by continuously monitoring carbon monoxide with a CEMS, you must demonstrate that hydrocarbon emissions during the comprehensive performance test do not exceed the hydrocarbon emissions standard. In addition, the limits you establish on the destruction and removal efficiency (DRE) operating parameters required under paragraph §63.1209(j) also ensure that you maintain compliance with the hydrocarbon emission standard. If you do not conduct the hydrocarbon demonstration and DRE tests concurrently, you must establish separate operating parameter limits under paragraph §63.1209(j) based on each test and the more restrictive of the operating parameter limits applies. [40 CFR 63.1209(a)(7)]

<u>Compliance Requirements:</u>

1. Compliance with the carbon monoxide and hydrocarbon emission standards. This paragraph applies to sources that elect to comply with the carbon monoxide and hydrocarbon emissions standards of this subpart by documenting continuous compliance with the carbon monoxide standard using a continuous emissions monitoring system and documenting compliance with the hydrocarbon standard during the destruction and removal efficiency (DRE) performance test or its equivalent. [40 CFR 1206(b)(6)]

a) If a DRE test performed pursuant to §63.1207(c)(2) is acceptable as documentation of compliance with the DRE standard, you may use the highest hourly rolling average hydrocarbon level achieved during the DRE test runs to document compliance with the hydrocarbon standard. An acceptable DRE test is any test for which the data and results are determined to meet quality assurance objectives (on a site-specific basis) such that the results adequately demonstrate compliance with the DRE standard. [40 CFR 1206(b)(6)(i)]

b) If during this acceptable DRE test you did not obtain hydrocarbon emissions data sufficient to document compliance with the hydrocarbon standard, you must either: [40 CFR 1206(b)(6)(ii)]

i) Perform, as part of the performance test, an “equivalent DRE test” to document compliance with the hydrocarbon standard. An equivalent DRE test is comprised of a minimum of three runs each with a minimum duration of one hour during which you operate the combustor as close as reasonably possible to the operating parameter limits that you established based on the initial DRE test. You must use the highest hourly

rolling average hydrocarbon emission level achieved during the equivalent DRE test to document compliance with the hydrocarbon standard; or [40 CFR 1206(b)(6)(ii)(A)]

ii) Perform a DRE test as part of the performance test. [40 CFR 1206(b)(6)(ii)(B)]

Record Keeping and Reporting:

See Permit Condition (EU0122 through EU0124 and EU0129)-005.

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-008

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Mercury

Emission Limitation:

1. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain mercury in excess of 130 µgm/dscm, corrected to 7 percent oxygen; [40 CFR 63.1219(a)(2)]
2. Significant figures . The emission limits provided by paragraphs §63.1219(a) and (b) are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance. [40 CFR 63.1219(d)]

Monitoring:

1. Mercury. You must comply with the mercury emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. [40 CFR 63.1209(l)]
   a) Feedrate of mercury. [40 CFR 63.1209(l)(1)]
      i) For incinerators and solid fuel boilers, when complying with the mercury emission standards under §63.1219, you must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages. [40 CFR 63.1209(l)(1)(i)]
      ii) Extrapolation of feedrate levels. In lieu of establishing mercury feedrate limits as specified in paragraphs §63.1209(l)(1)(i) through (iv), you may request as part of the performance test plan under §§63.7(b) and (c) and §§63.1207 (e) and (f) to use the mercury feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable federate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether: [40 CFR 63.1209(l)(1)(v)]
         1) Performance test metal feedrates are appropriate; and[40 CFR 63.1209(l)(1)(v)(A)]
         2) Whether the extrapolated feedrates you request are warranted considering historical metal federate data. [40 CFR 63.1209(l)(1)(v)(B)]
   b) Wet scrubber. If your combustor is equipped with a wet scrubber, you must establish operating parameter limits prescribed by paragraph §63.1209(o)(3), except for paragraph §63.1209(o)(3)(iv). [40 CFR 63.1209(l)(2)]

Record Keeping and Reporting:

See Permit Condition (EU0122 through EU0124 and EU0129)-005.

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-009

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Lead and Cadmium (Semi-Volatile Metals) and Arsenic, Beryllium and Chromium (Low Volatility Metals)

Emission Limitation:

1. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium and lead in excess of 230 µgm/dscm, combined emissions, corrected to 7 percent oxygen; [40 CFR 63.1219(a)(3)]
2. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain arsenic, beryllium, and chromium in excess of 92 µgm/dscm, combined emissions, corrected to 7 percent oxygen; [40 CFR 63.1219(a)(4)]
3. Significant figures . The emission limits provided by paragraphs §63.1219(a) and (b) are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance. [40 CFR 63.1219(d)]

Monitoring:

1. Semivolatile metals and low volatility metals. You must comply with the semivolatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. [40 CFR 63.1209(n)]
   a) Maximum inlet temperature to dry particulate matter air pollution control device. You must establish a limit on the maximum inlet temperature to the primary dry metals emissions control device on an hourly rolling average basis as the average of the test run averages. [40 CFR 63.1209(n)(1)]
   b) Maximum feedrate of semivolatile and low volatile metals [40 CFR 63.1209(n)(2)]
      i) General. You must establish federate limits for semivolatile metals (cadmium and lead) and low volatile metals (arsenic, beryllium, and chromium) as follows, except as provided by paragraph (n)(2)(vii) of this section. [40 CFR 63.1209(n)(2)(i)]
      ii) For incinerators, when complying with the emission standards under §63.1219, you must establish 12-hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average of the test run averages. [40 CFR 63.1209(n)(2)(ii)]
      iii) LVM limits for pumpable wastes. You must establish separate feedrate limits for low volatile metals in pumpable feedstreams using the procedures prescribed above for total low volatile metals. Dual feedrate limits for both pumpable and total feedstreams are not required, however, if you base the total feedrate limit solely on the feedrate of pumpable feedstreams. [40 CFR 63.1209(n)(2)(vi)]
      iv) Extrapolation of feedrate levels. In lieu of establishing feedrate limits as specified in paragraphs §63.1209(n)(2)(ii) through (vi), you may request as part of the performance test plan under §§63.7(b) and (c) and §§63.1207(e) and (f) to use the semivolatile metal and low volatile metal feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether: [40 CFR 63.1209(n)(2)(vii)]
         1) Performance test metal feedrates are appropriate; and[40 CFR 63.1209(n)(2)(vii)(A)]

2) Whether the extrapolated feedrates you request are warranted considering historical metal federate data. [40 CFR 63.1209(n)(2)(vii)(B)]

c) Control device operating parameter limits (OPLs). You must establish operating parameter limits on the particulate matter control device as specified by paragraph (m)(1) of this section; [40 CFR 63.1209(n)(3)]

d) Maximum total chlorine and chloride feedrate. You must establish a 12-hour rolling average limit for the feedrate of total chlorine and chloride in all feedstreams as the average of the test run averages. [40 CFR 63.1209(n)(4)]

e) Maximum flue gas flowrate or production rate. [40 CFR 63.1209(n)(5)]

i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. [40 CFR 63.1209(n)(5)(i)]

ii) You must comply with this limit on a hourly rolling average basis. [40 CFR 63.1209(n)(5)(ii)]

Record Keeping and Reporting:

See Permit Condition (EU0122 through EU0124 and EU0129)-005.

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-010

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Hydrochloric Acid and Chlorine Gas

Emission Limitation:

1. You must not discharge or cause combustion gases to be emitted into the atmosphere that contain hydrogen chloride and chlorine gas (total chlorine) in excess of 32 parts per million by volume, combined emissions, expressed as a chloride (Cl(−)) equivalent, dry basis and corrected to 7 percent oxygen; [40 CFR 63.1219(a)(6)]
2. Significant figures . The emission limits provided by paragraphs §63.1219(a) and (b) are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance. [40 CFR 63.1219(d)]

Monitoring:

1. Hydrogen chloride and chlorine gas. You must comply with the hydrogen chloride and chlorine gas emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. [40 CFR 63.1209(o)]

a) Feedrate of total chlorine and chloride. [40 CFR 63.1209(o)(1)]

i) Incinerators: You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages. [40 CFR 63.1209(o)(1)(i)]

b) Maximum flue gas flowrate or production rate. [40 CFR 63.1209(o)(2)]

i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence

time, as the average of the maximum hourly rolling averages for each run. [40 CFR 63.1209(o)(2)(i)]

ii) You must comply with this limit on a hourly rolling average basis; [40 CFR 63.1209(o)(2)(ii)]

c) Wet scrubber. If your combustor is equipped with a wet scrubber: [40 CFR 63.1209(o)(3)]

i) If your source is equipped with a high energy wet scrubber such as a venturi, hydrosonic, collision, or free jet wet scrubber, you must establish a limit on minimum pressure drop across the wet scrubber on an hourly rolling average as the average of the test run averages; [40 CFR 63.1209(o)(3)(i)]

ii) If your source is equipped with a low energy wet scrubber such as a spray tower, packed bed, or tray tower, you must establish a minimum pressure drop across the wet scrubber based on manufacturer's specifications. You must comply with the limit on an hourly rolling average; [40 CFR 63.1209(o)(3)(ii)]

iii) If your source is equipped with a low energy wet scrubber, you must establish a limit on minimum liquid feed pressure to the wet scrubber based on manufacturer's specifications. You must comply with the limit on an hourly rolling average; [40 CFR 63.1209(o)(3)(iii)]

iv) You must establish a limit on minimum pH on an hourly rolling average as the average of the test run averages; [40 CFR 63.1209(o)(3)(iv)]

v) You must establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average as the average of the test run averages. If you establish limits on maximum flue gas flowrate under this paragraph, you need not establish a limit on maximum flue gas flowrate under paragraph §63.1209(o)(2); and[40 CFR 63.1209(o)(3)(v)]

Record Keeping and Reporting:

See Permit Condition (EU0122 through EU0124 and EU0129)-005.

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-011

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Particulate Matter

Emission Limitation

1. Significant figures . The emission limits provided by paragraphs §63.1219(a) and (b) are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance. [40 CFR 63.1219(d)]
2. Alternative to the particulate matter standard. [40 CFR 63.1219(e)]
   a) General . In lieu of complying with the particulate matter standards of this section, you may elect to comply with the following alternative metal emission control requirement: [40 CFR 63.1219(e)(1)]
   b) Alternative metal emission control requirements for existing incinerators . [40 CFR 63.1219(e)(2)]
      i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 230 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and, [40 CFR 63.1219(e)(2)(i)]

ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 92 µgm/dscm, combined emissions, corrected to 7 percent oxygen. [40 CFR 63.1219(e)(2)(ii)]

c) Operating limits . Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs §63.1219(e)(2) and (e)(3) pursuant to §63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.[40 CFR 63.1219(e)(4)]

Monitoring

1. Particulate matter. You must comply with the particulate matter emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications. [40 CFR 63.1209(m)]
   a) Control device operating parameter limits (OPLs) [40 CFR 63.1209(m)(1)]
      i) Wet scrubbers. For sources equipped with wet scrubbers, including ionizing wet scrubbers, high energy wet scrubbers such as venturi, hydrosonic, collision, or free jet wet scrubbers, and low energy wet scrubbers such as spray towers, packed beds, or tray towers, you must establish limits on the following parameters: [40 CFR 63.1209(m)(1)(i)]
         1) For high energy scrubbers only, minimum pressure drop across the wet scrubber on an hourly rolling average, established as the average of the test run averages; [40 CFR 63.1209(m)(1)(i)(A)]
         2) For all wet scrubbers: [40 CFR 63.1209(m)(1)(B)]
            a) To ensure that the solids content of the scrubber liquid does not exceed levels during the performance test, you must either: [40 CFR 63.1209(m)(1)(i)(B)(1)]
               i) Establish a limit on solids content of the scrubber liquid using a CMS or by manual sampling and analysis. If you elect to monitor solids content manually, you must sample and analyze the scrubber liquid hourly unless you support an alternative monitoring frequency in the performance test plan that you submit for review and approval; or[40 CFR 63.1209(m)(1)(i)(B)(1)(i)]
               ii) Establish a minimum blowdown rate using a CMS and either a minimum scrubber tank volume or liquid level using a CMS. [40 CFR 63.1209(m)(1)(i)(B)(1)(ii)]
            b) For maximum solids content monitored with a CMS, you must establish a limit on a twelve-hour rolling average as the average of the test run averages. [40 CFR 63.1209(m)(1)(i)(B)(2)]
            c) For maximum solids content measured manually, you must establish an hourly limit, as measured at least once per hour, unless you support an alternative monitoring frequency in the performance test plan that you submit for review and approval. You must establish the maximum hourly limit as the average of the manual measurement averages for each run. [40 CFR 63.1209(m)(1)(i)(B)(3)]
            d) For minimum blowdown rate and either a minimum scrubber tank volume or liquid level using a CMS, you must establish a limit on an hourly rolling average as the average of the test run averages. [40 CFR 63.1209(m)(1)(i)(B)(4)]

3) For high energy wet scrubbers only, you must establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average. If you establish limits on maximum flue gas flowrate under this paragraph, you need not establish a limit on maximum flue gas flowrate under paragraph §63.1209(m)(2). You must establish these hourly rolling average limits as the average of the test run averages; and[40 CFR 63.1209(m)(1)(i)(C)]

b) Maximum flue gas flowrate or production rate. [40 CFR 63.1209(m)(2)]

i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. [40 CFR 63.1209(m)(2)(i)]

ii) You must comply with this limit on a hourly rolling average basis; [40 CFR 63.1209(m)(2)(ii)]

c) Maximum ash feedrate. Owners and operators of hazardous waste incinerators, solid fuel boilers, and liquid fuel boilers must establish a maximum ash feedrate limit as a 12-hour rolling average based on the average of the test run averages. This requirement is waived, however, if you comply with the particulate matter detection system requirements under §63.1206(c)(9). [40 CFR 63.1209(m)(3)]

Record Keeping and Reporting:

See Permit Condition (EU0122 through EU0124 and EU0129)-005.

PERMIT CONDITION (EU0122 through EU0124, and EU0129)-012

40 CFR Part 63, Subpart EEE, National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors – Standards: Destruction and Removal Efficiency (DRE) – Principal Organic Hazardous Constituent (POHC)

Emission Limitation:

1. Destruction and removal efficiency (DRE) standard [40 CFR 63.1219(c)]

a) 99.99% DRE. Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph §63.1219 (c)(3). You must calculate DRE for each POHC from the following equation: [40 CFR 63.1219(c)(1)]

$$DRE = \left[1 - \left(\frac{W_{out}}{W_{in}}\right)\right] \times 100\%$$

Where: W_{in} =mass federate of one POHC in a waste feedstream; and

W_{out} =mass emission rate of the same POHC present in the exhaust emissions prior to release to the atmosphere.

b) Principal organic hazardous constituent (POHC) . [40 CFR 63.1219(c)(3)]

i) You must treat each POHC in the waste feed that you specify under paragraph §63.1219(c)(3)(ii) to the extent required by paragraphs §63.1219(c)(1) and (c)(2). [40 CFR 63.1219(c)(3)(i)]

ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this

specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information. [40 CFR 63.1219(c)(3)(ii)]

Monitoring:

1. DRE. To remain in compliance with the destruction and removal efficiency (DRE) standard, you must establish operating limits during the comprehensive performance test (or during a previous DRE test under provisions of §63.1206(b)(7)) for the following parameters, unless the limits are based on manufacturer specifications, and comply with those limits at all times that hazardous waste remains in the combustion chamber: [40 CFR 63.1209(j)]
   a) Minimum combustion chamber temperature. [40 CFR 63.1209(j)(1)]
      i) You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under §63.1207(e); [40 CFR 63.1209(j)(1)(i)]
      ii) You must establish a minimum hourly rolling average limit as the average of the test run averages; [40 CFR 63.1209(j)(2)(ii)]
   b) Maximum flue gas flowrate or production rate. [40 CFR 63.1209(j)(2)]
      i) As an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run. [40 CFR 63.1209(j)(2)(i)]
      ii) You must comply with this limit on a hourly rolling average basis; [40 CFR 63.1209(j)(2)(ii)]
   c) Maximum hazardous waste feedrate. [40 CFR 63.1209(j)(3)]
      i) You must establish limits on the maximum pumpable and total hazardous waste feedrate for each location where hazardous waste is fed. [40 CFR 63.1209(j)(3)(i)]
      ii) You must establish the limits as the average of the maximum hourly rolling averages for each run. [40 CFR 63.1209(j)(3)(ii)]
      iii) You must comply with the feedrate limit(s) on a hourly rolling average basis; [40 CFR 63.1209(j)(3)(iii)]
   d) Operation of waste firing system. You must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained. [40 CFR 63.1209(j)(4)]

Compliance Requirements:

1. Compliance with the DRE standard. [40 CFR 63.1206(b)(7)]
   a) Except as provided in paragraphs §63.1206(b)(7)(ii) and (b)(7)(iii): [40 CFR 63.1206(b)(7)(i)]
      i) You must document compliance with the Destruction and Removal Efficiency (DRE) standard under this subpart only once provided that you do not modify the source after the DRE test in a manner that could affect the ability of the source to achieve the DRE standard. [40 CFR 63.1206(b)(7)(i)(A)]
      ii) You may use any DRE test data that documents that your source achieves the required level of DRE provided: [40 CFR 63.1206(b)(7)(i)(B)]

1) You have not modified the design or operation of your source in a manner that could effect the ability of your source to achieve the DRE standard since the DRE test was performed; and, [40 CFR 63.1206(b)(7)(i)(B)(1)]
2) The DRE test data meet quality assurance objectives determined on a site-specific basis. [40 CFR 63.1206(b)(7)(i)(B)(2)]

b) Sources that feed hazardous waste at locations other than the normal flame zone. (A) Except as provided by paragraph §63.1206(b)(7)(ii)(B), if you feed hazardous waste at a location in the combustion system other than the normal flame zone, then you must demonstrate compliance with the DRE standard during each comprehensive performance test; [40 CFR 63.1206(b)(7)(ii)]

c) For sources that do not use DRE previous testing to document conformance with the DRE standard pursuant to §63.1207(c)(2), you must perform DRE testing during the initial comprehensive performance test. [40 CFR 63.1206(b)(7)(iii)]

Record Keeping and Reporting:

See Permit Condition (EU0122 through EU0124 and EU0129)-005.

Crop Protection Products			
EU#	**EP#**	**Process Description**	**Control Devices**
EU0130	CPC-02	Solvent Storage Tank (process #110-023); 158,300 gallon capacity; Installed 1975-76	Chilled Water Condenser (process #631-303)
EU0131	CPC-06	Organic Premix Tank (process #180-118); 17,100 gallon capacity; Installed 1989	Chilled Water Condenser (process #631-304)
EU0132	CPC-07	Product Storage Tank (process #180-109); 1,713,000 gallon capacity; Installed 1975-76	Chilled Water Condenser (process #631-101)
EU0133	CPC-10	Active Ingredient Storage Tank (process #180-001); 49,500 gallon capacity; Installed 1975-76	none
EU0134	CPC-11	Product Storage Tank (process #180-112); 103,000 gallon capacity; Installed 1989	none
EU0135	CPC-12	Formulator C (process #180-122) Process Vessel	Chilled Water Condenser (process #631-305)
EU0136	CPC-13	Product Holding Tank (process #180-126) Process Vessel	Chilled Water Condenser (process #631-308)
EU0137	CPC-18	Loading for Bulk Trucks	none
EU0138	CPC-19	Formulator A (process #180-003A) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0139	CPC-20	Formulator B (process #180-003B) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0140	CPC-21	Hold Tank (process #180-006) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0141	CPC-21	Delivery Tank (process #180-044) Process Vessel	Chilled Water Condenser (process #631-091C)
EU0142	CPC-24	Drum Filler (process #180-010)	none

PERMIT CONDITION (EU0130 through EU0142)-001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart FFFF-National Emissions Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Emission Limits, Work Practice Standards, and Compliance Requirements:

(1) If you have a Group 2 emission point that becomes a Group 1 emission point after the compliance date for your affected source, you must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs. [§62.2445(d)]

(2) If, after the compliance date for your affected source, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, you must comply with the applicable emission limits specified in Table 3 to this subpart and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs. [§63.2445(e)]

(3) You must be in compliance with the emission limits and work practice standards in tables 6 and 11 to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in §§63.2460(b)(1) through (3), (6), and (7), as well as §63.2480(a),(b)(1) through (5), except as specified in §63.2450(m) and (p). You must meet the notification, reporting, and recordkeeping requirements specified in §§63.2515, 63.2520, and 63.2525. [§63.2450(a)]

(4) Reporting. [§63.2450(m)]

(a) When there are conflicts between this subpart and referenced subparts for the due dates of reports required by this subpart, reports must be submitted according to the due dates presented in this subpart. [§63.2450(m)(2)]

(b) Excused excursions, as defined in subparts G and SS of this part 63, are not allowed. [§63.2450(m)(3)]

(5) Opening a safety device, as defined in §63.2550, is allowed at any time conditions require it to avoid unsafe conditions. [§63.2450(p)]

(6) Group status. If a process has batch process vents, as defined in §63.2550, you must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in §63.1257(d)(2)(i) and (ii), except as specified in paragraphs (b)(1) through (7) of this section. [§63.2460(b)]

(a) To calculate emissions caused by the heating of a vessel without a process condenser to a temperature lower than the boiling point, you must use the procedures in §63.1257(d)(2)(i)(C)(3). [§63.2460(b)(1)]

(b) To calculate emissions from depressurization of a vessel without a process condenser, you must use the procedures in §63.1257(d)(2)(i)(D)(10). [§63.2460(b)(2)]

(c) To calculate emissions from vacuum systems for the purposes of this subpart, the receiving vessel is part of the vacuum system, and terms used in Equation 33 to 40 CFR Part 63, subpart GGG, are defined as follows: [§63.2460(b)(3)]

$$E = \frac{(La)(t)}{MW_{HAP}} \left(\frac{\sum_{i=1}^{n} P_i MW_i}{P_{system} - \sum_{j=1}^{m} P_j} \right)$$

P_{system}= absolute pressure of the receiving vessel;
P_i= partial pressure of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;
P_j= partial pressure of condensables (including HAP) determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;
MW_{HAP}= molecular weight of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.
L_a=total air leak rate in the system, mass/time
t =time of vacuum operation

(d) To calculate uncontrolled emissions when a vessel is equipped with a process condenser, you must use the procedures in §63.1257(d)(3)(i)(B), except as specified in paragraphs (b)(4)(i) through (vii) of this section. [§63.2460(b)(4)]
(i) You must determine the flowrate of gas (or volume of gas), partial pressures of condensables, temperature (T), and HAP molecular weight (MWHAP) at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver. [§63.2460(b)(4)(i)]
(ii) You must assume that all of the components contained in the condenser exit vent stream are in equilibrium with the same components in the exit condensate stream (except for noncondensables). [§63.2460(b)(4)(ii)]
(iii)You must perform a material balance for each component. [§63.2460(b)(4)(iii)]
(iv) For the emissions from gas evolution, the term for time, t, must be used in Equation 12 to 40 CFR Part 63, subpart GGG. [§63.2460(b)(4)(iv)]
(v) Emissions from empty vessel purging shall be calculated using Equation 36 to 40 CFR Part 63, subpart GGG and the exit temperature and exit pressure conditions of the condenser or the conditions of the dedicated receiver. [§63.2460(b)(4)(v)]
(vi)You must conduct an engineering assessment as specified in §63.1257(d)(2)(ii) for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum operations, gas evolution, air drying, or empty vessel purging. The requirements of paragraphs (b)(3) through (4) of this section shall apply. [§63.2460(b)(4)(vi)]
(vii) You may elect to conduct an engineering assessment if you can demonstrate to the Administrator that the methods in §63.1257(d)(3)(i)(B) are not appropriate. [§63.2460(b)(4)(vii)]

(e) You may change from Group 2 to Group 1 in accordance with either paragraph (b)(6)(i) or (ii) of this section. You must comply with the requirements of this section and submit the test report in the next Compliance report. [§63.2460(b)(6)]
(i) You may switch at any time after operating as Group 2 for at least 1 year so that you can show compliance with the 10,000 pounds per year (lb/yr) threshold for Group 2 batch process vents for at least 365 days before the switch. You may elect to start keeping records of emissions from Group 2 batch process vents before the compliance date. Report a switch based on this provision in your next compliance report in accordance with §63.2520(e)(10)(i). [§63.2460(b)(6)(i)]
(ii) If the conditions in paragraph (b)(6)(i) of this section are not applicable, you must provide a 60-day advance notice in accordance with §63.2520(e)(10)(ii) before switching. [§63.2460(b)(6)(ii)]

(f) As an alternative to determining the uncontrolled organic HAP emissions as specified in §63.1257(d) (2)(i) and (ii), you may elect to demonstrate that non-reactive organic HAP are the only HAP used in the process and non-reactive HAP usage in the process is less than

10,000 lb/yr. You must provide data and supporting rationale in your notification of compliance status report explaining why the non-reactive organic HAP usage will be less than 10,000 lb/yr. You must keep records of the non-reactive organic HAP usage as specified in §63.2525(e)(2) and include information in compliance reports as specified in §63.2520(e)(5)(iv). [§63.2460(b)(7)]

(7) You must meet each requirement in table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) of this section. [§63.2480(a)]

(8) If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part. [§63.2480(b)]

(a) The requirements for pressure testing in §63.179(b) or §63.1036(b) may be applied to all processes, not just batch processes. [§63.2480(b)(1)]

(b) For the purposes of this subpart, pressure testing for leaks in accordance with §63.179(b) or §63.1036(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment. [§63.2480(b)(2)]

(c) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under §63.1022(b)(1) or §63.181(b)(1)(i). [§63.2480(b)(3)]

(d) For connectors in gas/vapor and light liquid service at an existing source, you may elect to comply with the requirements in §63.169 or §63.1029 for connectors in heavy liquid service, including all associated recordkeeping and reporting requirements, rather than the requirements of §63.174 or §63.1027. [§63.2480(b)(4)]

(e) For pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 parts per million (ppm) or greater as an alternative to the values specified in §63.1026(b)(2)(i) through (iii) or §63.163(b)(2). [§63.2480(b)(5)]

(9) The provisions of this section 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 this subpart. [§63.2480(d)]

Notification, Reports, and Records:

(1) You must submit all of the notifications in §§63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified. [§63.2515(a)]

(2) You must submit each report in Table 11 to this subpart that applies to you. [§63.2520(a)]

(3) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section. [§63.2520(b)]

(a) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. [§63.2520(b)(3)]

(b) Each subsequent compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the semiannual reporting period. [§63.2520(b)(4)]

(c) For each affected source that is subject to permitting regulations pursuant to 40 CFR Part 70 or 40 CFR Part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting

authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section. [§63.2520(b)(5)]

(4) Compliance report. The compliance report must contain the information specified in paragraphs (e)(1) through (10) of this section. [§63.2520(e)]

(a) Company name and address. [§63.2520(e)(1)]

(b) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report. [§63.2520(e)(2)]

(c) Date of report and beginning and ending dates of the reporting period. [§63.2520(e)(3)]

(d) For each SSM during which excess emissions occur, the compliance report must include records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction. [§63.2520(e)(4)]

(e) The compliance report must contain the information on deviations, as defined in §63.2550, according to paragraphs (e)(5)(i), (ii), (iii), and (iv) of this section. [§63.2520(e)(5)]

(i) If there are no deviations from any emission limit, operating limit or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period. [§63.2520(e)(5)(i)]

(ii) For each deviation from an emission limit, operating limit, and work practice standard that occurs at an affected source where you are not using a continuous monitoring system (CMS) to comply with the emission limit or work practice standard in this subpart, you must include the information in paragraphs (e)(5)(ii)(A) through (C) of this section. This includes periods of SSM. [§63.2520(e)(5)(ii)]

(A) The total operating time of the affected source during the reporting period. [§63.2520(e)(5)(ii)(A)]

(B) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. [§63.2520(e)(5)(ii)(B)]

(C) Operating logs of processes with batch vents from batch operations for the day(s) during which the deviation occurred, except operating logs are not required for deviations of the work practice standards for equipment leaks. [§63.2520(e)(5)(ii)(C)]

(iii) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive HAP is the only HAP and usage is less than 10,000 lb/yr, the total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, or total uncontrolled hydrogen halide and halogen HAP emissions from all batch process vents and continuous process vents in a process are less than 1,000 lb/yr, include the records associated with each calculation required by §63.2525(e) that exceeds an applicable HAP usage or emissions threshold. [§63.2520(e)(5)(iv)]

(f) Include each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, you must 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 purposes of this paragraph, a revised operating scenario for an existing process is considered to be a new operating scenario. [§63.2520(e)(7)]

(g) Records of process units added to a PUG as specified in §63.2525(i)(4) and records of primary product redeterminations as specified in §63.2525(i)(5). [§63.2520(e)(8)]
(h) Applicable records and information for periodic reports as specified in referenced subparts F, G, H, SS, UU, WW, and GGG of this part and subpart F of 40 CFR Part 65. [§63.2520(e)(9)]
(i) Notification of process change. [§63.2520(e)(10)]
(i) Except as specified in paragraph (e)(10)(ii) of this section, whenever you make a process change, or change any of the information submitted in the notification of compliance status report or a previous compliance report, that is not within the scope of an existing operating scenario, you must document the change in your compliance report. A process change does not include moving within a range of conditions identified in the standard batch, and a nonstandard batch does not constitute a process change. The notification must include all of the information in paragraphs (e)(10)(i)(A) through (C) of this section. [§63.2520(e)(10)(i)]
(A) A description of the process change. [§63.2520(e)(10)(i)(A)]
(B) Revisions to any of the information reported in the original notification of compliance status report under paragraph (d) of this section. [§63.2520(e)(10)(i)(B)]
(C) Information required by the notification of compliance status report under paragraph (d) of this section for changes involving the addition of processes or equipment at the affected source. [§63.2520(e)(10)(i)(C)]
(ii) You must submit a report 60 days before the scheduled implementation date of any of the changes identified in paragraph (e)(10)(ii)(A), (B), or (C) of this section. [§63.2520(e)(10)(ii)]
(A)Any change to the information contained in the precompliance report. [§63.2520(e)(10)(ii)(A)]
(B) A change in the status of a control device from small to large. [§63.2520(e)(10)(ii)(B)]
(C) A change from Group 2 to Group 1 for any emission point except for batch process vents that meet the conditions specified in §63.2460(b)(6)(i). [§63.2520(e)(10)(ii)(C)]
(5) Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR Part 65. [§63.2525(a)]
(6) Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section. [§63.2525(b)]
(a) A description of the process and the type of process equipment used. [§63.2525(b)(1)]
(b) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in §63.2505; wastewater point of determination (POD); storage tanks; and transfer racks. [§63.2525(b)(2)]
(c) The applicable control requirements of this subpart, including the level of required control, and for vents, the level of control for each vent. [§63.2525(b)(3)]
(d) Calculations and engineering analyses required to demonstrate compliance. [§63.2525(b)(7)]
(e) For reporting purposes, a change to any of these elements not previously reported, constitutes a new operating scenario. [§63.2520(b)(8)]
(7) A schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect. [§63.2520(c)]
(8) The information specified in paragraph (e)(2), (3), or (4) of this section, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required for situations described in paragraph (e)(1) of this section. [§63.2520(e)]

(a) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than 10,000 lb/yr, as specified in §63.2460(b)(7), you must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only usage if the usage during the year is less than 10,000 lb. [§63.2520(e)(2)]

(b) If you meet none of the conditions specified in paragraphs (e)(1) through (3) of this section, you must keep records of the information specified in paragraphs (e)(4)(i) through (iv) of this section. [§63.2520(e)(4)]

(i) A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions. [§63.2520(e)(4)(i)]

(ii) A record of whether each batch operated was considered a standard batch. [§63.2520(e)(4)(ii)]

(iii) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch. [§63.2520(e)(4)(iii)]

(iv) Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly. [§63.2520(e)(4)(iv)]

(9) A record of each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(s). [§63.2520(f)]

(10) In the SSMP required by §63.6(e)(3), you are not required to include Group 2 emission points. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment. [§63.2520(j)]

Utilities Department			
EU#	EP#	Unit Description	Control Devices
Northeast Power			
EU0143	UTIL-70	Coal Bunkers	none
EU0144	UTIL-02	NEP Coal Fired Boiler #4	Electrostatic Precipitator
EU0145	UTIL-03	NEP Coal Fired Boiler #5	Electrostatic Precipitator
EU0146	UTIL-04	Ash Handling System	Baghouse
EU0147	UTIL-05	Ash Handling System	Baghouse
EU0148	no EP	Ash Silo (process #632-000)	Baghouse
East Utilities Boilers			
EU0149	UTIL-07	NG East Utilities Boiler #1	none
EU0150	UTIL-07	NG East Utilities Boiler #2	none
Water Treatment Lime Handling			
EU0151	UTIL-08	Lime Storage Bin	Baghouse
Cooling Towers			
EU0152	UTIL-27	Induced Draft Cooling Tower #5	none
EU0153	UTIL-35	Induced Draft Cooling Tower #3	none
EU0154	UTIL-62	Induced Draft Cooling Tower #6	none

PERMIT CONDITION (EU0143 through EU0154)-001

10 CSR 10-6.220, Restriction of Emissions of Visible Air Contaminants

Emission Limitation:

1. No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20% for EU0143 and EU0149 through EU0150. For EU0144 and EU0145, the opacity limit for existing sources is 40%.
2. Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

Monitoring/Record Keeping/Reporting:

As detailed in Core Permit Requirements.

PERMIT CONDITION (EU0149 and EU0150)-002

10 CSR 10-3.060, Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

The permittee shall not emit particulate matter in excess of 0.16 pounds per million BTU of heat input.

Operation Limitation/Equipment Specifications:

This emission unit shall be limited to burning pipeline grade natural gas.

Monitoring/Record Keeping/Reporting:

1. The permittee shall maintain on the premises of the installation calculations demonstrating compliance with this rule. These calculations are shown in Tables 25 and 26 of the Statement of Basis.
2. These calculations shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.

PERMIT CONDITION (EU0144 and EU0145)-002

10 CSR 10-3.060, Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

The permittee shall not emit particulate matter in excess of 0.34 pounds per million BTU of heat input.

Operational Parameters/Equipment Specifications:

1. Periodic monitoring for particulate matter, as defined below, is not required during periods of time greater than one day in which the source does not operate. Calculations based on the use of emission factors suggest that the installation must operate control devices (Electrostatic Precipitators (ESP)) to meet the particulate emission limit for this source. The control device is required to be in service and operational when EU0010 is operation. Exception: Except as defined in 10 CSR 10-6.050, Start-Up, Shutdown, and Malfunction Conditions." Operation of

the control device must be maintained using standard manufacturer recommendations and Good Engineering Practices (GEP).

2. An operation and maintenance plan shall be developed in accordance with manufacturer specifications for the ESP.

Monitoring:

1. For particulate matter periodic monitoring compliance, a record of the initial stack test and other stack testing conducted on this unit or any subsequent testing will be maintained and made available immediately for inspection to the Department of Natural Resources upon request.
2. For particulate matter periodic monitoring compliance, the permittee shall monitor three specific parameters that can be used to indicate the ESP's performance. The permittee shall monitor the primary and secondary voltage, primary and secondary current and number of fields on line at least once each week when the unit is on line.
3. The permittee makes a commitment to take timely corrective action during periods of excursions where the indicators of the electrostatic precipitator performance are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return the operation within the indicator range. An excursion is determined by the average discreet data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not indicate a violation of an applicable requirement. ESP parameters alone, are not prima facie evidence of a violation but may be used with other information to establish a violation of a particulate matter limitation.
4. An audible or visual alarm that indicates precipitator trouble will be monitored.
5. Inspection of the rapper operation, transformer-rectifier (T-R) set operation, inspection of the ash removal system are required to be included in the operation and maintenance plan. Corrective action measures will be implemented on the occurrence of an abnormal condition. Abnormal conditions will include the following: a T-R set failure, rapper system failure, ash transport system failure. Random T-R system failure and rapper failure (up to two T-R sets and 20% of the rappers) will not significantly affect precipitator performance.
6. Each major unit overhaul shall be defined in the maintenance plan to include the checking and correct plate electrode alignment, the inspection of the condition collection surface fouling, the mechanical condition of the T-R set and the inspection of the internal structural components. Corrective action procedures will be devised and implemented on the occurrence of an abnormal condition. The appropriate measures for remediation will be implemented in a timely manner.

Record Keeping:

1. The permittee shall maintain a written or electronic copy of all inspections and any action resulting from the inspection. (see Attachment D – This log or an equivalent created by the permittee must be used to certify compliance with this requirement.)
2. All instrument calibration shall be recorded.
3. Maintain a spare parts inventory by a computerized inventory or other Administrator approved management system.
4. The permittee shall maintain a record of the initial stack testing and any other subsequent testing or test information for particulate matter required from this rule.
5. The permittee shall maintain records of any monitoring or control equipment malfunctions.
6. All records shall be maintained for five years. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.

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 the permittee determined that the emission unit(s) exceeded the emission limitation(s) and/or operating parameter range listed above.
2. Reports of any deviations from monitoring other than the operating parameter range, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.

PERMIT CONDITION (EU0144 and EU0145)-003

10 CSR 10-6.260[1], Restriction of Emission of Sulfur Compounds

Emission Limitation:

1. No person shall cause or permit emissions of sulfur dioxide into the atmosphere from any indirect heating source in excess of eight pounds of sulfur dioxide per million BTUs actual heat input averaged on any consecutive three hour time period
2. No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards. [10 CSR 10-6.260(3)(B) of May 30, 2004 version & 10 CSR 10-6.010 Ambient Air Quality Standards]

Pollutant	Concentration by Volume	Remarks
Sulfur Dioxide (SO_2)	0.03 parts per million (ppm) (80 micrograms per cubic meter (µg/m^3))	Annual arithmetic mean
	0.14 ppm (365 µg/m^3)	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 µg/m^3)	3-hour average not to be exceeded more than once per year
Hydrogen Sulfide (H_2S)	0.05 ppm (70 µg/m^3)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 µg/m^3)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
Sulfuric Acid (H_2SO_4)	10 µg/m^3	24-hour average not to be exceeded more than once in any 90 consecutive days

Operational Limitation/Equipment Specifications:

The emission unit shall be limited to fuel with a sulfur content of no more than 4.63% sulfur by weight.

[1] 10 CSR 10-6.260(3)(B) is state-only.

Monitoring:

1. The permittee shall maintain an accurate record of the sulfur content of fuel used. Fuel purchase receipts, analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.
2. If the requirements of condition 1 can not be met, then compliance to the emission limitations shall be determined by source testing. The heating value of the fuel shall be determined as specified in 10 CSR 10-6.040(2). Source testing to determine compliance shall be performed as specified in 10 CSR 10-6.030(6). The actual heat input shall be determined by multiplying the heating value of the fuel by the amount of fuel burned during the source test period.
3. Other methods approved by the permitting agency in advance may be used to verify compliance.

Record Keeping:

1. If monitoring option 1 is used to verify compliance, then the permittee shall maintain records on the premises of the analysis of all fuel used which shows weight percentage of sulfur in the fuel. Fuel purchase receipts, analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.
2. If monitoring option 2 is used to verify compliance, then the permittee shall maintain records on the premises of all source testing performed.
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:

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 any exceedance of the emission limit or sulfur content limit established by 10 CSR 10-6.260, or any malfunction which causes an exceedance.

PERMIT CONDITION (EU0152 through EU0154)-002

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart A General Provisions and Subpart —National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

Emission Limitation:

The permittee shall not use chromium-based water treatment chemicals in any affected industrial process cooling tower. [§63.402]

Monitoring/Recordkeeping/Reporting:

No routine monitoring, sampling, or analysis is required. In accordance with section 114 of the Act, the Administrator or delegated authority can require cooling water sample analysis of an IPCT if there is information to indicate that the IPCT is not in compliance with the requirements of §63.402 of this subpart. The permittee may demonstrate compliance through recordkeeping in accordance with §63.404(c) in lieu of a water sample analysis. If cooling water sample analysis is required:

(a) The water sample analysis shall be conducted in accordance with Method 7196, Chromium, Hexavalent (Colorimetric), contained in the Third Edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW–846, (November 1986) and its

Revision I, (December 1987), which are available for the cost of $110.00 from the Government Printing Office, Superintendent of Documents, Washington, DC 20402, (202) 783–3238 (document number 955–001–00000–1; or Method 3500–Cr D, Colorimetric Method, contained in the 18th Edition of "Standard Methods for the Examination of Water and Wastewaster" (1992), which is available from the American Public Health Association, 1015 15th Street, NW., Washington, DC 20005. These methods were approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be inspected as a part of Docket A–91–65, located at the Air and Radiation Docket and Information Center, room M1500, EPA Central Docket Section, 401 M St., SW., Washington, DC. Copies may be inspected at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. [§64.404(a)]

(b) On or after 3 months after the compliance date, a cooling water sample residual hexavalent chromium concentration equal to or less than 0.5 parts per million by weight shall indicate compliance with §63.402. Alternatively, a permittee may demonstrate compliance through record keeping in accordance with §63.404(c). [63.404(b)]

(c) To demonstrate compliance with §63.402, in lieu of the water sample analysis provided for in §63.404(a), the permittee of each IPCT may maintain records of water treatment chemical purchases, including invoices and other documentation that includes invoices and other documentation that includes date(s) of purchase or shipment, trade name or other information to identify composition of the product, and quantity of the product. [63.404(c)]

(d) Following a request, by the Administrator or delegated authority, under §63.404(a) for a water sample analysis, failure to either meet the concentration level specified in §63.404(b) or provide the records specified in §63.404(c) shall indicate a violation of §63.402. [63.404(d)]

PERMIT CONDITION EU0151-002

10 CSR 10-6.400, Control of Emission of Particulate Matter From Industrial Processes

Emission Limitation:

1. The permittee shall not emit particulate matter from EU0151 in excess of 30.51 lbs./hr.
2. The permittee shall not emit particulate matter from any source in a concentration in excess of 0.30 grain per standard cubic feet of exhaust gases.

Monitoring:

1. The baghouse shall be maintained such that the pressure drop remains in the normal operating range of two to eight inches of water whenever the emission unit is in operation. A pressure drop reading of less than two inches may be observed for a period following the installation of a new bag.
2. All instruments and control equipment shall be calibrated, maintained, and operated according to the manufacturer's specifications and recommendations.
3. Check and document the baghouse pressure drop daily, whenever the emission unit is in operation. If the pressure drop falls out of the normal operating range, corrective action shall be taken as soon as practicable but within eight hours to return the pressure drop to normal.
4. Check and document the cleaning sequence of the dust collector every six months.
5. Inspect bags for leaks and wear every six months.

6. Inspect all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods every six months.

Record Keeping:

1. The permittee shall document all pressure drop readings (see Attachment E).
2. All inspections, corrective actions, and instrument calibration shall be recorded (see Attachment D).
3. Attachments D and E contain logs including these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement
4. All records shall be maintained for five years.
5. Records may be kept in either written or electronic form.

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 the permittee determined that the emission unit(s) exceeded the emission limitation(s) and/or pressure drop range listed above.
2. Reports of any deviations from monitoring other than the pressure drop range, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.

IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (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. 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) Refer to the regulation for a complete list of allowances. The following is a listing of exceptions to the allowances:

(A) Burning of household or domestic refuse. Burning of household or domestic refuse is limited to open burning on a residential premises having not more than four dwelling units, provided that the refuse originates on the same premises, with the following exceptions:

1. Kansas City metropolitan area. The open burning of household refuse must take place in an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of Kansas City and every contiguous municipality;
2. Springfield-Greene County area. The open burning of household refuse must take place outside the corporate limits of Springfield and only within areas zoned A-1, Agricultural District;
3. St. Joseph area. The open burning of household refuse must take place within an area zoned for agricultural purposes and outside that portion of the metropolitan area surrounded by the corporate limits of St. Joseph; and
4. St. Louis metropolitan area. The open burning of household refuse is prohibited;

(B) Yard waste, with the following exceptions:

1. Kansas City metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation shall require an open burning permit;
2. Springfield-Greene County area. The City of Springfield requires an open burning permit for the open burning of trees, brush or any other type of vegetation. The City of Springfield prohibits the open burning of tree leaves;
3. St. Joseph area. Within the corporate limits of St. Joseph, the open burning of trees, tree leaves, brush or any other type of vegetation grown on a residential property is allowed during the following calendar periods and time-of-day restrictions:
   A. A three (3)-week period within the period commencing the first day of March through April 30 and continuing for twenty-one (21) consecutive calendar days;
   B. A three (3)-week period within the period commencing the first day of October through November 30 and continuing for twenty-one (21) consecutive calendar days;
   C. The burning shall take place only between the daytime hours of 10:00 a.m. and 3:30 p.m.; and
   D. In each instance, the twenty-one (21)-day burning period shall be determined by the Director of Public Health and Welfare of the City of St. Joseph for the region in which the City of St. Joseph is located provided, however, the burning period first shall receive the approval of the Department Director; and

4. St. Louis metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation is limited to the period beginning September 16 and ending April 14 of each calendar year and limited to a total base area not to exceed sixteen (16) square feet. Any open burning shall be conducted only between the hours of 10:00 a.m. and 4:00 p.m. and is limited to areas outside of incorporated municipalities;

(3) 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 owner or operator fails to comply with the conditions or any provisions of the permit.

(4) BASF Corporation-Hannibal Plant may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation or untreated wood waste are burned. Open burning shall occur at least two hundred (200) yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if BASF Corporation-Hannibal Plant fails to comply with the provisions or any condition of the open burning permit.

(A) In a nonattainment area, as defined in 10 CSR 10-6.020, paragraph (2)(N)5., the Director shall not issue a permit under this section unless the owner or operator can demonstrate to the satisfaction of the Director that the emissions from the open burning of the specified material would be less than the emissions from any other waste management or disposal method.

(5) Reporting and Record Keeping. New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in 40 CFR 60.2245-60.2260. The provisions of 40 CFR Part 60 Subpart CCCC promulgated as of September 22, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. To comply with NSPS 40 CFR 60.2245-60.2260, sources must conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the Director.

(6) Test Methods. The visible emissions from air pollution sources shall be evaluated as specified by 40 CFR Part 60, Appendix A–Test Methods, Method 9–Visual Determination of the Opacity of Emissions from Stationary Sources. The provisions of 40 CFR Part 60, Appendix A, Method 9 promulgated as of December 23, 1971 is incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401.

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 Section 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 Section 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 Sections 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 eighteen 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 10-6.100 Alternate Emission Limits

Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the Department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

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

1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) annually.
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 to satisfy the requirements of the Federal Clean Air Act, Title V.
5) The permittee shall complete required reports on state supplied EIQ forms or in a form satisfactory to the Director and the reports shall be submitted to the Director by June 1 after the end of each reporting period.
6) 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 twelve (12)-month period immediately preceding the end of the reporting period.
7) 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 10-6.170
Restriction of Particulate Matter 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 particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter 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 to occur any fugitive particulate matter 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:

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.

The permittee shall maintain the following monitoring schedule:

1) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
2) Should no violation of this regulation be observed during this period then-
   a) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
   b) If a violation is noted, monitoring reverts to weekly.
   c) Should no violation of this regulation be observed during this period then-
      i) The permittee may observe once per month.
      ii) If a violation is noted, monitoring reverts to weekly.
3) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

Recordkeeping:

The permittee shall document all readings on Attachment A, or its equivalent, noting the following:

1) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
2) Whether the visible emissions were normal for the installation.
3) Whether equipment malfunctions contributed to an exceedance.
4) 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 10-3.090 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.

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants

Emission Limitation:

No owner or other person shall cause or permit to be discharged into the atmosphere from any source any visible emissions in excess of the limits specified by this rule. This permit will contain the opacity limits identified (10, 20 or 40 percent) for the specific emission units.

Monitoring:

1) The permittee shall conduct opacity readings on each emission unit using the procedures contained in U.S. EPA Test Method 22. The permittee is only required to take readings when the emission unit is operating and when the weather conditions allow. If the permittee observes no visible or other significant emissions using these procedures, then no further observations are required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
2) The permittee must maintain the following monitoring schedule:
   a) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
   b) Should the permittee observe no violations of this regulation during this period then-
      i) The permittee may observe once every two (2) weeks for a period of eight (8) 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.
3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Recordkeeping:
The permittee shall maintain records of all observation results using Attachments B,C, and D (or equivalents), noting:
1) Whether any air emissions (except for water vapor) were visible from the emission units;
2) All emission units from which visible emissions occurred;
3) Whether the visible emissions were normal for the process;
4) The permittee shall maintain records of any equipment malfunctions, which may contribute to visible emissions; and,
5) The permittee shall maintain records of all USEPA Method 9 opacity tests performed.

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 Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources 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.

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 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 motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or 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 (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

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.

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (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 Record Keeping and Reporting Requirements

1) Record Keeping
   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's 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 Part 64 exceedances.
   d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. 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 paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) 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 Under Section 112(r)

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 40 CFR Section 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:

1) June 21, 1999;
2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
3) 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

All scenarios are explained in the Statement of Basis. All operating permit conditions are written to provide operational flexibility for the various operating scenarios.

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, 901 North 5th Street, Kansas City, KS 66101, as well as the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and 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 application 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 Section 303 of the Act or Section 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 the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources 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

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's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, KS 66101, 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.

1) Section 502(b)(10) changes. Changes that, under Section 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, 901 North 5th Street, Kansas City, KS 66101, 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 the 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 the 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 must provide 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, 901 North 5th Street, Kansas City, KS 66101, no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3. 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)12 Responsible Official

The application utilized in the preparation of this permit was signed by Mr. D.E. Warren, Plant Manager. On October 15, 2007, the Air Pollution Control Program was informed that Ms. Nicole McGlone-Santistevan, Plant Manager was the responsible official. On March 18, 2010, the Air Pollution Control Program was informed that Dr. Michael McFarlane, Site 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 owner or operator of this air contaminant source 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 source owner or operator 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

This permit may be reopened for cause if:

1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
2) 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,
3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
   a) The permit has a remaining term of less than three years;
   b) The effective date of the requirement is later than the date on which the permit is due to expire; or
   c) 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,
4) 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
5) 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 A

Fugitive Emission Observations

Date	Time	Visible Emissions					Abnormal Emissions		Initial
		Beyond Boundary		Less Than Normal	Normal	Greater Than Normal	Cause	Corrective Action	
		No	Yes						

Attachment B

Opacity Emission Observations

Date	Time	Visible Emissions				Abnormal Emissions		Initial
		Emission Source	Normal	Less Than	Greater Than	Cause	Corrective Action	

Attachment C

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 D

Inspection/Maintenance/Repair/Malfunction Log

Emission Unit # or CVM # _____

Date/Time	Inspection/ Maintenance Activities	Malfunction Activities					
		Malfunction	Impact	Duration	Cause	Action	Initials

ATTACHMENT E

Pressure Drop Log for Dust Collectors

Control Device ID	Week Beginning (Month/Day/Year)	Week Ending (Month/Day/Year)	Pressure Drop (inches water)	Within specifications? (Yes/No)

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 July 16, 1996; modifications received September 20, 2002, and October 22, 2007;
2) 2006 Emissions Inventory Questionnaire, received May 29, 2007;
3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition;
4) WebFIRE;
5) Construction Permit #1179, Issued by EPA;
6) Construction Permit #0380-002;
7) Construction Permit #0385-002;
8) Construction Permit #0885-005;
9) Construction Permit #0887-003;
10) Construction Permit # 0488-001;
11) Construction Permit #0588-007;
12) Construction Permit #0988-004;
13) Construction Permit #0489-004;
14) Construction Permit #1189-001;
15) Construction Permit #0690-005;
16) Construction Permit #0491-002
17) Construction Permit #0392-006;
18) Construction Permit #0393-001;
19) Construction Permit #0793-001
20) Construction Permit #0694-008;
21) Construction Permit #0894-010;
22) No permit required project #29400001025;
23) Construction Permit #0696-013;
24) Construction Permit #122000-003;
25) No permit required project #1998-04-062;
26) Interprogram task project # 1999-04-052;
27) Interprogram task project #2000-02-063;
28) Interprogram task project #2001-08-035;
29) Interprogram task project #2002-07-130;
30) Incinerator modification request, project #2003-05-115;
31) Interprogram task project #2003-09-042;
32) Construction Permit #082005-014;
33) No permit required project #2007-09-021; and
34) Debottlenecking request, project #2009-02-016.

Plant Overview
This installation was constructed and is operated to manufacture pesticides and agricultural chemicals. Herbicides produced at this installation include PROWL®, PURSUIT®, SCEPTER®, RAPTOR®, ARSENAL®, ASSERT®, and CADRE®. Insecticides produced at this installation include THIMET®, COUNTER®, Chlorfenapyr, '268, and Metaflumizone (BAS 320I). Pesticide intermediates produced at this installation include XXXX, XXXX, XXXXX-XXX, and XXXX. The installation is broken down into several production areas. These production areas/plants include:

- Pyrrole/XXXX/320I Plant
- THIMET®/COUNTER® Plant (owned by AMVAC, operated by BASF for AMVAC)
- Crop Protection Products (CPC) Plant
- Imidazolinone (IMI-1) Plant
- Imidazolinone (IMI-2) Plant
- PROWL® Plant
- Waste Management Areas
- Utilities Department
- Services Department

Dismantled/shutdown areas/plants at the installation include:

- Chemico and Weatherly Nitric Acid Plants effective July 1988
- Ammonium Nitrate Plant effective July 1988
- PROWL® Sulfuric Acid Concentration (SAC) Plant in 1988
- Dicalcium Phosphate Plant in 1991
- Counter® CR® Plant in 2003

The installation was known for years as American Cyanamid, until it was purchased by the BASF Corporation, effective July 1, 2000. For this reason, many of the existing documents refer to the installation as "American Cyanamid," or some variation of this name.

Detailed discussions of the construction permits and other regulatory issues are addressed on a production plant basis.

Other Air Regulations Determined Not to Apply to the Operating Permit
The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

Chapter 2, *Air Quality Standards and Air Pollution Control Rules Specific to the Kansas City Metropolitan Area*
Chapter 4, *Air Quality Standards and Air Pollution Control Regulations for the Springfield – Green County Area*
Chapter 8, *Kansas City Health Department, Air Quality Section*
Chapter 2A Air, *City of Springfield, Air Pollution Control Authority*

Regulations under these Chapters were checked as applicable to the facility in the revised Application for Authority to Operate forms dated September 17, 2002, received September 20, 2002. The installation is not located within the cities and/or counties affected by these regulations, therefore these regulations do not apply to the installation.

10 CSR 10-3.050, *Restriction of Emission of Particulate Matter from Industrial Processes*
This rule was rescinded March 30, 2001 and replaced by 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter from Industrial Processes.* Therefore, 10 CSR 10-3.050 is not included in the operating permit.

10 CSR 10-3.080, *Restriction of Visible Air Contaminants*
This rule was rescinded May 30, 2000 and replaced by 10 CSR 10-6.170, *Restriction of Visible Air Contaminants.* Therefore, 10 CSR 10-3.080 is not included in the operating permit.

10 CSR 10-3.100, *Restriction of Emission of Sulfur Compounds*
10 CSR 10-3.150, *Restriction of Emission of Sulfur Compounds From Indirect Heating Sources*
These rules were rescinded July 30, 1997, and replaced by 10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds. Therefore, 10 CSR 10-3.100 and 10 CSR 10-3.150 are not included in the operating permit.

10 CSR 10-6.100, *Alternate Emission Limits*
This rule is not applicable because the installation is in an ozone attainment area.

10 CSR 10-6.240, *Asbestos Abatement Projects – Registration, Notification, and Performance Requirements*
This rule has been determined not to be applicable to the installation as it applies to asbestos abatement contractors. This installation is not a registered asbestos abatement contractor.

Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits
In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.
There have been many regulations promulgated since the submittal of the operating permit application. It would be redundant to list them here, and again in the plant specific areas of the statement of basis. Therefore, all applicable requirements are discussed in the plant specific sections.

The federal regulations listed below do not apply to the installation. They are placed here for clarity. Applicable regulations are discussed in each production plant.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart Cd—Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units
This regulation applies to existing "sulfuric acid production unit" as defined in §60.81(a) of subpart H of this part. The activities at the BASF facility do not meet this definition, therefore this rule does not apply.

40 CFR Part 60 Subpart E—Standards of Performance for Incinerators
This rule did apply to the installation's incinerators in the past. However, these units are currently regulated under 40 CFR Part 63 Subpart EEE.

40 CFR Part 60 Subpart G—Standards of Performance for Nitric Acid Plants

The provisions of this subpart apply to each nitric acid production unit, BASF does not have nitric acid production units. Therefore this rule does not apply.

40 CFR Part 60 Subpart H—Standards of Performance for Sulfuric Acid Plants

The provisions of this subpart apply to each sulfuric acid production unit. The processes in the Sulfuric Acid Regeneration plant do not meet the definition of sulfuric acid production unit given in this rule. Therefore, the rule does not apply.

40 CFR Part 60 Subpart T—Standards of Performance for the Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants
40 CFR Part 60 Subpart U—Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants
40 CFR Part 60 Subpart V—Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants
40 CFR Part 60 Subpart W—Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants
40 CFR Part 60 Subpart X—Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities

These rules do not apply to BASF because the facility does not perform operations for the phosphate fertilizer industry.

40 CFR Part 60 40 CFR Part 60 Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006
40 CFR Part 60 Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006
40 CFR Part 60 Subpart III—Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes
40 CFR Part 60 Subpart NNN—Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations
40 CFR Part 60 Subpart RRR—Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes

These regulations do not apply to BASF because the facility does not produce products for the synthetic organic chemical manufacturing industy.

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63 Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

40 CFR Part 63 Subpart G—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater

40 CFR Part 63 Subpart H—National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

BASF is not subject to these rules. However, there are specific sections of these rules that are reference by other MACT which do apply. This is discussed further in the plant specific section of this Statement of Basis.

40 CFR Part 63 Subpart BB—National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants

BASF does not produce phosphate fertilizers, therefore this rule does not apply.

40 CFR Part 63 Subpart EEEE—National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)

BASF is exempt from this regulation per §63.2338(c)(1). All equipment regulated by this MACT are already regulated under other MACT rules.

40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

On July 30, 2007, the United States Court of Appeals, District of Columbia Circuit officially ordered a full vacatur of the Boiler MACT rule. The vacatur has the same effect as if a federal Boiler MACT rule was never promulgated. This means there is no longer a September 13, 2007 compliance date for sources affected by this HAP source category. We are awaiting written guidance from EPA on how to handle sources formerly subject to the Boiler MACT. If there is a new MACT promulgated and the units at this installation are subject with requirements a major modification will be required to update this operating permit.

40 CFR Part 63 Subpart GGGGG- National Emission Standards for Hazardous Air Pollutants: Site Remediation

BASF is exempt per 40 CFR 63.7881(b)(3) which states:" Your site remediation is not subject to this subpart if the site remediation will be performed under a Resource Conservation and Recovery Act (RCRA) corrective action conducted at a treatment, storage and disposal facility (TSDF) that is either required by your permit issued by either the U.S. Environmental Protection Agency (EPA) or a State program authorized by the EPA under RCRA Section 3006; required by orders authorized under RCRA; or required by orders authorized under RCRA Section 7003."

BASF's current RCRA permit includes the corrective action language associated with SWMU's, and classifies the installation as a TSDF. Therefore this rule does not apply.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

40 CFR Part 61Subpart F—National Emission Standard for Vinyl Chloride

This regulation applies to plants which produce: Ethylene dichloride by reaction of oxygen and hydrogen chloride with ethylene; Vinyl chloride by any process, and/or one or more polymers containing any fraction of polymerized vinyl chloride.

BASF does not produce these chemicals, therefore this rule does not apply.

40 CFR Part 61Subpart J—National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene

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

BASF does not have any of these sources in benzene service, therefore this rule does not apply.

40 CFR Part 61Subpart V—National Emission Standard for Equipment Leaks (Fugitive Emission Sources)

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

All VHAP components are regulated under MACT rules, which are more stringent. Therefore this rule does not apply.

40 CFR Part 61Subpart Y—National Emission Standard for Benzene Emissions From Benzene Storage Vessels

This subpart applies to each storage vessel that is storing benzene having a specific gravity within the range of specific gravities specified in ASTM D836–84 for Industrial Grade Benzene, ASTM D835–85 for Refined Benzene-485, ASTM D2359–85a or 93 for Refined Benzene-535, and ASTM D4734–87 or 96 for Refined Benzene-545.

BASF does not store benzene with these specifications. Therefore, this rule does not apply.

40 CFR Part 61 Subpart FF—National Emission Standard for Benzene Waste Operations

The provisions of this subpart apply to hazardous waste treatment, storage, and disposal facilities that treat, store, or dispose of hazardous waste generated by any facility listed in paragraph (a) of this section. The waste streams at hazardous waste treatment, storage, and disposal facilities subject to the provisions of this subpart are the benzene-containing hazardous waste from any facility listed in paragraph (a) of this rule.

BASF does not meet these specifications, therefore this rule does not apply.

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.

However, §64.2(b)(i) contains an exemption for units which are subject to emission limits or standards proposed after November 15, 1990, pursuant to Section 111 or 112 of the Clean Air Act. Also, §64.2(b)(vi) contains an exemption for units which are subject to a standard for which the Part 70 Operating Permit specifies a continuous compliance demonstration.

All of the pollutant specific emission units that would be subject to CAM based on emissions meet at least one of these exemptions. Therefore, CAM does not apply.

Pyrrole/XXXXX/320I Plant

Plant Overview

The Pyrrole/XXXXX/320I Plant manufactures the following products: Pyrrole (a.k.a. chlorfenapyr or PIRATE®), XXXXXX, , and 320I (Metafluminzone). Pyrrole and 320I are all insecticides, XXXXXX is an intermediate for RAPTOR® herbicide. This plant was originally permitted under Construction Permit #122000-003 to produce two (2) separate products, Pyrrole and XXXXX. Much of the same process equipment permitted is used in the production of both products. In 2006 a modification that allowed for the production of a new broad-spectrum insecticide called 320I was permitted under Construction Permit #022006-005. The production of 320I uses existing and new equipment in the Pyrrole/XXXXX Plant. The new equipment added in Construction Permit #022006-005 was a potassium methoxide ($KCOH_3$) scrubber. The 320I insecticide is a solid pesticide active ingredient, which is subsequently used in the production of insecticide formulations at other BASF facilities. Only one of these chemicals can be produced at a time. This plant has sixteen emission points which contain emissions from raw material unloading, chemical manufacturing processes, finished product packaging, and storage tanks.

Raw Material Unloading:

The raw materials are received in different areas of the plant. Emission points PY-03, 11, 14, and 15 account for the emissions from dry raw material unloading. Each of these points are controlled by individual baghouse/HEPA filter systems. The HEPA filters are voluntarily installed and operated. Emission point PY-16 accounts for the emissions from the potassium methoxide receiving process. These emissions are controlled by a scrubber (process #631-080). There are no HAPs present in these dry material unloading stations.

Chemical Manufacturing:

The chemical manufacturing processes will generate fugitive and stack emissions. The fugitive emissions are accounted for under PY-04, with fugitives created by sampling being reported as PY-10. The stack emissions are reported under PY-06 and PY-07. PY-06 is the Thermal Oxidizer System. All storage tanks and process vessels (except those with individual emission points) are equipped with closed vent systems and are vented to one of three area seal pots to maintain a seal on the process emissions. The primary purpose of the seal pots is for flash protection. The seal pots are vented to the plant's fume handling system scrubber (process #631-206/207/210) prior to the thermal oxidizer for acid/odor control. The scrubber system exhaust is vented to the thermal oxidizer (process #631-401). The thermal oxidizer exit gas is vented to another caustic scrubber (process #631-402) to remove acidic components. This scrubber vents to the atmosphere. The scrubber immediately upstream of the thermal oxidizer (process #631-210) operates in different modes depending on the product being produced. The system is designed to operate in caustic mode during the production of Pyrrole product, and will operate in acid mode during the production of XXXXX. The thermal oxidizer was installed in 1999, has a MHDR of 10 MMBtu/hr, and burns natural gas. PY-07 is used to account for the process emissions when the thermal oxidizer is out of service. The emissions are treated by the fume handling system scrubber (process #631-206/207/210) and released directly to the atmosphere. Finished product packaging is reported under emission point PY-05. The process is controlled by a baghouse followed by a voluntary HEPA filter. There are no HAPs in the finished packaging product.

Storage tanks/Wastewater tanks

The emissions from individual storage/wastewater tanks are reported under PY-01, -02, -08, -12, -13. Tanks PY-01, -02 and -12 vent directly to the atmosphere. PY-08 is for the drain hold tank which may contain incidental amounts of solvent. It is controlled by a voluntary carbon canister. PY-13 represents two dedicated

waste storage tanks (process #633-401 and 633-421) which are physically located in the North Waste Management Area. The liquid from these dedicated waste tanks will be incinerated in the hazardous waste incinerators. Each of these tanks is controlled by a chilled water vent condenser (process #631-407 and 631-427), followed by a shared scrubber (process #631-428). In 2003, EP PY-13 was modified to bring these tanks into compliance with 40 CFR Part 63 Subpart MMM. This emission point is no longer used as the fumes from these tanks pass through the vent condensers and into a fume system which vents to the hazardous waste incinerators. The scrubber is still installed, but no longer used because the tanks are vented to the fume system. Liquid raw material storage tanks and a chlorine charger are located in the tank farm, which is controlled by a packed scrubber (process #631-063), which are reported as emission point PY-09. The materials stored here include: XXXXXX. All tanks in the tank farm are stored under pressure to minimize standing losses. All tanks in this area are vented to seal pots, then the packed scrubber.

A cooling tower was installed as part of the original construction permit. The tower is used to produce noncontact cooling water for the various heat exchanger systems in the production plant. The tower is identified as Cooling Tower #6 (EP UTIL-62). There are no HAPs normally present in the cooling tower.

In the operating permit modification submittal dated 9/16/2002, BASF submitted the operating permit forms for the equipment installed under Construction Permit #122000-003. In this submittal, a process modification was detailed as follows:
The original Pyrrole process utilized XXXX as a raw material for the manufacture of an intermediate chemical in the initial steps of the overall Pyrrole production process. The original suppliers of this raw material are no longer manufacturing it. BASF staff developed modifications to the original Pyrrole process to provide an alternative process to manufacture the XXXX intermediate utilizing existing Pyrrole production equipment. The process modification utilizes two new raw materials in the overall Pyrrole production process XXXX to produce a chemical intermediate that is then reacted in the Pyrrole process to form the required quantity of XXXX for the first steps of the Pyrrole production process. The process modification utilized existing Pyrrole process equipment. Process modifications consisted primarily of piping modifications between vessels, transfer pumps, and changes in operating/process programming. All estimated changes in potential emissions at maximum production rates were evaluated and it was determined that no changes were required in existing emission control systems for this installation and that estimated changes in emissions at maximum production rates after the modifications were below the insignificant levels detailed in 10 CSR 10-6.060(1)(D)(3).

Construction Permit History

1. Construction Permit 122000-003
   This permit was issued November 1, 2000, to authorize construction of a new Pyrrole/XXXXX chemical production process. The process will include facilities for raw material handling and storage, utilities services, production processes and related support facilities. This permit authorizes installation of all equipment and process that are contained in emission points PY-01 through PY-15, as described in the Pyrrole/XXXXX/320I Process description [see Plant Overview]. Additionally, this permit authorizes construction of Cooling Tower #6 (EP UTIL-62). The anhydrous hydrochloric acid tank permitted for the tank farm was not installed. The assumptions used to account for the particulate matter emissions from PY-03, -05, -11, -14, and -15 only include the baghouse controls. The permittee has voluntarily installed HEPA filters downstream of these baghouses. The emissions decrease provided by these filters was not considered in the permit review. Additionally, the assumptions used to account for the emissions from PY-08 did not include any control equipment. The permittee has voluntarily installed a carbon canister.

This permit applies 40 CFR Part 60 Subpart Kb to the storage tanks with capacities larger than 10,567 gallons and also contains 9 special conditions, which were superceded by construction permit #092009-007.

2. Construction Permit 022006-005
   This permit was issued February 6, 2006, to authorize modification of the Pyrrole/XXXXX manufacturing facility to allow for the production of a new broad-spectrum insecticide called 320I, which is a solid pesticide active ingredient. Production will use existing equipment and a new potassium methoxide ($KCOH_3$) scrubber. This permit authorizes installation of a potassium methoxide scrubber, identified as emission points PY-16. A detailed description of this process is provided in the Pyrrole/XXXXX/320I Process description [see Plant Overview].
   The permit applies 40 CFR Part 63 Subpart MMM, National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production and contains one special condition which contains operational requirements for the wet scrubber associated with PY-16. This condition has been included in this operating permit as an emission unit specific permit condition.
3. Construction Permit 092009-007
   This permit was issued September 9, 2009, to authorize the installation of process equipment, piping, and instrumentation and the modification of process chemistry to remove a bottleneck and increase the XXXXX production capacity. Previous to this permit, BASF had voluntarily installed HEPA filters to control emissions from emission points PY-03, PY-05, PY-14, and PY-15). However, since the emissions from this project were calculated taking the HEPA filter efficiency into account, the operation of these filters is no longer voluntary.

<u>New Source Performance Standards (NSPS) Applicability</u>

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

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.

This regulation applies to each storage vessel for volatile organic liquid storage which has a storage capacity greater than or equal to 75 m^3 (19,812.9 gallons). According to the definitions in the rule, a process tank is not a storage vessel [see 60.111b]. On October 15, 2003 the applicability section of this subpart was modified so that this subpart no longer applies to tanks with capacities of less than 75m^3. This amendment also exempted process tanks from this rule.

Table 2: Applicability Determinations for 40 CFR Part 60 Subparts K, Ka, and Kb for the Pyrrole/XXXXX/320 I Production Plant

EU#	Point #	Unit Description	Process #	Explanation
w/o	PY-01	Raw Material Section 110: Caustic Soda Storage Tank	110-024	Not subject to K, Ka, or Kb; see note 1
w/o	PY-02	Raw Material Section 110: 3-nitro-o-xylene Storage Tank	110-040	Not subject to K, Ka, or Kb; see note 2
EU0033	PY-06	Process Section 140: Chlorobenzene/Acetonitrile Storage Tank/Cyclohexane	140-011	Not subject to K, Ka, or Kb; see note 2
EU0009	PY-06	Process Section 150: Process Tank	150-043	Not subject to K, Ka, or Kb; see note 3
EU0035	PY-06	Process Section 150: XXXX tank	150-046	Not subject to K, Ka, or Kb; see note 2
EU0011	PY-06	Process Section 160: Wet Xylene/Acetic Acid	160-007	Not subject to K, Ka, or Kb; see note 2
EU0013	PY-06	Process Section 170: Process Tank	170-003	Not subject to K, Ka, or Kb; see note 3
EU0014	PY-06	Process Section 170: Centrifuge Feed Tank	170-001	Not subject to K, Ka, or Kb; see note 3
EU0015	PY-06	Process Section 170: Mother Liquor Tank	170-005	Not subject to K, Ka, or Kb; see note 3
EU0036	PY-06	Process Section 210: 320I Nitrile Tank	210-005	Not subject to K, Ka, or Kb; see note 2
EU0019	PY-06	Raw Material Section 110: Triethylamine Storage Tank	110-007	Not subject to K, Ka, or Kb; see note 4
EU0020	PY-06	Raw Material Section 110:Methanol/IPA Storage Tank	110-021	Not subject to K, Ka, or Kb; see note 4
EU0021	PY-06	Raw Material Section 110:Toluene/Xylene Storage Tank	110-034	Not subject to K, Ka, or Kb; see note 4
EU0037	PY-06	Raw Material Section 110: Dimethylformamide Storage Tank	110-012	Not subject to K, Ka, or Kb; see note 2
EU0038	PY-06	Raw Material Section 110: Sodium Methoxide /Methanol/ Diethoxymethane/ 320 I Ester Storage Tank	110-015	Not subject to K, Ka, or Kb; see note 2
EU0039	PY-06	Raw Material Section 110: Chlorobenzene/ Acetonitrile Storage Tank	110-031	Not subject to K, Ka, or Kb; see note 2
EU0040	PY-06	Raw Material Section 110: Trimethylamine Storage Tank	110-074	Not subject to K, Ka, or Kb; see note 2
EU0041	PY-06	Raw Material Section 110: Tetrahydrofuran Storage Tank	110-078	Not subject to K, Ka, or Kb; see note 2
EU0023	PY-06	Waste Storage Section 633: Acidic Aqueous Storage Tank	633-006	Not subject to K, Ka, or Kb; see note 4
EU0024	PY-06	Waste Storage Section 633: Basic Waste Hold Tank	633-001	Not subject to K, Ka, or Kb; see note 4
EU0025	PY-06	Waste Storage Section 633: Organic Waste Hold Tank	633-004	Not subject to K, Ka, or Kb; see note 4
EU0026	PY-08	Waste Storage Section 633: Floor Drain Hold Tank	633-012	Not subject to K, Ka, or Kb; see note 4
EU0042	PY-09	Raw Material Section 110 Tank Farm: XXXX Tank	110-010	Not subject to K, Ka, or Kb; see note 2
EU0043	PY-09	Raw Material Section 110 Tank Farm: XXXX Tank	110-001	Not subject to K, Ka, or Kb; see note 2
EU0044	PY-09	Raw Material Section 110 Tank Farm:XXXX Tank	110-018	Not subject to K, Ka, or Kb; see note 2
EU0045	PY-09	Raw Material Section 110 Tank Farm: XXXX	110-060	Not subject to K, Ka, or Kb; see note 2
w/o	PY-12	Raw Material Section 110: Sulfuric Acid Storage Tank	110-072	Not subject to K, Ka, or Kb; see note 1
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank	633-401	Not subject to K, Ka, or Kb; see note 4
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank	633-421	Not subject to K, Ka, or Kb; see note 4

Note 1: The liquid contained in the tank does not meet the definitions of volatile organic liquid or petroluem liquid
Note 2: The tank does not satisfy the size requirements in the applicability section of the rule.
Note 3: Process tanks are exempt.
Note 4: These tanks are subject to 40 CFR Part 63 Subpart MMM, and as such are required to comply only with the provisions of that MACT. [see 63.1360(i)(3)]

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63 Subpart MMM-National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This regulation applies to the facility-wide collection of pesticide active ingredient manufacturing process units (PAI process units) that process, use, or produce HAP, and are located at a major source of HAP. An affected source also includes waste management units, heat exchange systems, and cooling towers that are associated with the PAI process units.[see §63.1360(a)] This regulation contains emission standards for process vents, storage vessels, wastewater, product dryers and bag dumps, heat exchange systems, and equipment leaks. A new source is defined as an affected source for which construction or reconstruction commenced after November 10, 1997.

This regulation has the potential to overlap with other federal regulations. The overlaps that are applicable to BASF are detailed below:

Overlap with NSPS Subpart Kb: after the compliance dates specified in §63.1364, a Group 1 or Group 2 storage vessel that is also subject to Kb is required to comply only with the provisions of subpart MMM.
Overlap with RCRA regulations for wastewater: after the compliance dates specified in §63.1364, the permittee of an affected wastewater stream that is also subject to the provisions of 40 CFR Parts 260 through 272 shall comply with the more stringent control, testing, monitoring, recordkeeping and reporting requirements between the RCRA and MACT regulations. The permittee shall keep a record of which requirements were the most stringent and shall submit this information to the Administrator upon request.

There are five production units and two waste management areas are subject to this subpart. They are the Central Treatment Systems (further separated into the North Waste Management Area and the South Waste Management Area), the PROWL® Manufacturing Facility, the IMI-1 Manufacturing Facility, the IMI-2 Manufacturing Facility, the THIMET® and COUNTER® Manufacturing Facility, and the Pyrrole/XXXXX/320I Manufacturing Facility. The applicability of this regulation is organized by production facility.

Pyyrole/XXXXX/320I Facility

Chlorfenapyr is the active ingredient in the insecticide known under the general name Pyrrole. XXXXX (XXXXXX) is the key intermediate for RAPTOR® herbicide. 320I is a broad spectrum insecticide. These products are produced in a multi-step process, which includes batch and continuous processing steps involving chemical reactions and various unit operations. These products are produced in separate campaigns and cannot be produced at the same time. The gases/fumes bearing HAPs are destroyed in a serial treatment process using a scrubber, a thermal oxidizer, and second scrubber. This treatment process is dedicated to this use. The first scrubber system will employ either an acidic (during XXXXX production) or basic scrubbing liquid (during Pyrrole production) to remove inorganic HAPs. The waste gas system is then routed to the thermal oxidizer for destruction of organic HAPs. The final scrubber uses a liquid at a neutral pH to remove acid gases and inorganic HAPs generated by the combustion process. After the first scrubber, there is a bypass to the atmosphere. If the emissions are not bypassed, they will go through the thermal oxidizer and final scrubber, then to the atmosphere. The thermal oxidizer/scrubber system meets the definition of a large control device. All units that are subject to MMM meet the definition of existing units.

Table 3: Applicability Determinations for 40 CFR Part 63 Subpart MMM and the Pyrrole/XX/320I production plant

EU#	Point #	Unit Description	Process #	Explanation
EU0001	none	Heat Exchanger	631-035	Subject to MMM as a heat exchanger
EU0001a	PY-04	Pesticides Manufacturing Building Vents		Subject to MMM as equipment leaks
EU0002	PY-06	Process Section 180: Batch Product Dryer	180-029	Subject to MMM as a product dryer
EU0003	PY-06	Process Section 120: Reactor	120-001	Subject to MMM as a process vent
EU0004	PY-06	Process Section 130: Reactor	130-151	Subject to MMM as a process vent
EU0005	PY-06	Process Section 140: Reactor	140-001	Subject to MMM as a process vent
EU0006	PY-06	Process Section 150: Reactor	150-001	Subject to MMM as a process vent
EU0007	PY-06	Process Section 150: Reactor	150-031	Subject to MMM as a process vent
EU0008	PY-06	Process Section 150: Reactor	150-005	Subject to MMM as a process vent
EU0009	PY-06	Process Section 150: Process Tank	150-043	Subject to MMM as a process vent
EU0010	PY-06	Process Section 160: Reactor	160-001	Subject to MMM as a process vent
EU0011	PY-06	Process Section 160: Wet Xylene/Acetic Acid	160-007	Subject to MMM as a process vent when containing wet xylene
EU0012	PY-06	Process Section 170: Centrifuges	170-004 A/B	Subject to MMM as a processs vent
EU0013	PY-06	Process Section 170: Process Tank	170-003	Subject to MMM as a processs vent
EU0014	PY-06	Process Section 170: Centrifuge Feed Tank	170-001	Subject to MMM as a process vent
EU0015	PY-06	Process Section 170: Mother Liquor Tank	170-005	Subject to MMM as a process vent
EU0016	PY-06	Process Section 190: Reactor	190-001	Subject to MMM as a process vent
EU0017	PY-06	Process Section 200: Reactor	200-001	Subject to MMM as a process vent
EU0018	PY-06	Process Section 220: Reactor	220-001	Subject to MMM as a process vent
EU0019	PY-06	Raw Material Section 110: Triethylamine Storage Tank	110-007	Subject to MMM as a Group 1 storage vessel
EU0020	PY-06	Raw Material Section 110:Methanol/IPA Storage Tank	110-021	Subject to MMM as a Group 1 storage vessel
EU0021	PY-06	Raw Material Section 110:Toluene/Xylene Storage Tank	110-034	Subject to MMM as a Group 1 storage vessel
EU0022	PY-07	Emergency bypass for Thermal Oxidizer seal pot from PY-06		Subject to the bypass recordkeeping provisions
EU0023	PY-06	Waste Storage Section 633: Acidic Aqueous Storage Tank	633-006	Subject to MMM as a wastewater tank
EU0024	PY-06	Waste Storage Section 633: Basic Waste Hold Tank	633-001	Subject to MMM as a wastewater tank
EU0025	PY-06	Waste Storage Section 633: Organic Waste Hold Tank	633-004	Subject to MMM as a wastewater tank
EU0026	PY-08	Waste Storage Section 633: Floor Drain Hold Tank	633-012	Subject to MMM as a wastewater tank
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank	633-401	Subject to MMM as a wastewater tank-See
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank	633-421	North Waste Management Area
EU0029	PY-03	Dry Material Unloading		Not subject to MMM, see note 2
EU0030	PY-05	Process Section 180: Product Supersack Filler	180-008	Not subject to MMM, see note 2
EU0031	PY-05	Process Section 180: Swivel Drum Filler	180-027	Not subject to MMM, see note 2
EU0032	PY-06	Product Transfer System (pneumatic conveying system)		Not subject to MMM, see note 2
EU0033	PY-06	Process Section 140: Chlorobenzene/Acetonitrile Storage Tank/Cyclohexane	140-011	No applicable requirements, see note 3
EU0034	PY-06	Process Section 150: Benzoic sack unloading station	150-070	Not subject to MMM, see note 2
EU0035	PY-06	Process Section 150: XXXX tank	150-046	Not subject to MMM, see note 1
EU0036	PY-06	Process Section 210: 320I Nitrile Tank	210-005	Not subject to MMM, see note 1
EU0037	PY-06	Raw Material Section 110: Dimethylformamide Storage Tank	110-012	No applicable requirements, see note 3
EU0038	PY-06	Raw Material Section 110: Sodium Methoxide /Methanol/ Diethoxymethane/ 320 I Ester Storage Tank	110-015	No applicable requirements, see note 3
EU0039	PY-06	Raw Material Section 110: Chlorobenzene/ Acetonitrile Storage Tank	110-031	No applicable requirements, see note 3
EU0040	PY-06	Raw Material Section 110: Trimethylamine Storage Tank	110-074	Not subject to MMM, see note 1
EU0041	PY-06	Raw Material Section 110: Tetrahydrofuran Storage Tank	110-078	Not subject to MMM, see note 1
EU0042	PY-09	Raw Material Section 110 Tank Farm: XXXX Tank	110-010	Not subject to MMM, see note 1
EU0043	PY-09	Raw Material Section 110 Tank Farm: XXXX Tank	110-001	Not subject to MMM, see note 1
EU0044	PY-09	Raw Material Section 110 Tank Farm:XXXX Tank	110-018	Not subject to MMM, see note 1
EU0045	PY-09	Raw Material Section 110 Tank Farm: XXXX	110-060	Not subject to MMM, see note 1
EU0046	PY-09	Raw Material Section 110 Tank Farm: XXXX Cylinders		Not subject to MMM, see note 1
EU0047	PY-11	Raw Materials Handling System: Dry Material Unloading		Not subject to MMM, see note 2
EU0048	PY-14	Raw Materials Handling System: Dry Material Unloading	631-073	Not subject to MMM, see note 2
EU0049	PY-15	Raw Materials Handling System: Dry Material Unloading	631-070	Not subject to MMM, see note 2
EU0050	PY-16	Raw Materials Handling System: Potassium methoxide receiving	631-080	Not subject to MMM, see note 2
w/o	PY-01	Raw Material Section 110: Caustic Soda Storage Tank	110-024	Not subject to MMM, see note 1
w/o	PY-02	Raw Material Section 110: 3-nitro-o-xylene Storage Tank	110-040	Not subject to MMM, see note 1
w/o	PY-10	Pesticides Manufacturing, Process Sampling Fugitives & Centrifuge Spot Ventilation		Not subject to MMM: does not meet definition of process vent
w/o	PY-12	Raw Material Section 110: Sulfuric Acid Storage Tank	110-072	Not subject to MMM, see note 1
w/o	PY-12	Raw Material Section 110: Sulfuric Acid Storage Tank	110-072	Not subject to MMM, see note 1

Note 1: 63.1360(d)(5)(vii) states that vessels storing material that contains no organic HAP or contains organic HAP as impurities only are exempt from MMM.
Note 2: The dry material unloading stations and finished packaging section are not subject to MMM because these processes do not emit HAPs. Although they do meet the definition of bag dumps and product dryers, the emission standards apply to those units that perform the following:

- Product dryers that dry a PAI or integral intermediate that is a HAP;
- Bag dumps that introduce to a PAI process unit a feedstock that is a solid material and a HAP; or
- Gaseous HAP emissions from product dryers or bag dumps.

These units do not perform any of these operations, therefore they have no applicable standard and are not subject to MMM.
Note 3: The MACT contains two categories of storage vessels: Group 1 and Group 2. Although these tanks are subject to the MACT, they have no applicable requirements.

1. Emission Standards: process vents, storage vessels, wastewater, bag dumps and product dryers, and heat exchangers [§ 63.1362]
   a) Process Vents
      §63.1362(b) contains the provisions for process vents. The equipment listed above is subject to the standards of (b)(2)(ii) which requires that uncontrolled organic HAP emissions from the vents be reduced by 98% by weight or greater, and (b)(3)(ii) which requires a 94% reduction in HCl and CL_2 emissions.

      Initial compliance with these standards was demonstrated following the provisions in §63.1365(c)(1), (c)(2), and (c)(3). §63.1365(c)(2) contains the provisions used to calculate the uncontrolled HAP emissions. §63.1365(c)(3) contains the provisions for determining the controlled emissions. §63.1365(c)(3)(ii) presents the requirements for large control devices, and states that the control efficiency of the device shall be determining by performance testing. On September 29, 2006 BASF fulfilled the performance testing requirement. Since these are one time requirements that have been satisfied, they are not included in this Operating Permit.

      Continued compliance requires monitoring and inspection of the thermal oxidizer and the following scrubber, as this constitutes the control system that was evaluated in the stack test. Therefore, the monitoring and inspection requirements of §63.1366(b)(1)(ii) for scrubbers and §63.1366(b)(1)(vii) for thermal incinerators have been included in this operating permit. Additionally, the requirements found in Table 3 of this subpart for all control devices have been included in the permit. §63.1366(b)(1)(ii) states that a minimum flow rate or pressure drop must be established based upon the conditions of the initial compliance demonstration. §63.1366(b)(3)(ii)(A) states that this value must be based on the average of the average values from each of the three test runs. The minimum pressure drop is 0.62 WC and the minimum flow rate is 105.7 gallons per minute.

      The thermal oxidizer system flows, temperatures, pressure drops, and pHs are monitored and controlled by a Honeywell TDC 3000 distributed control system and further monitored and controlled by a Triconex Trident triple-modular redundant, fault tolerant controller which provides safety interlocking. The thermal oxidizer system does not have a continuous monitoring system installed.
   b) Storage Vessels
      No tanks in the Pyrrole/XXXXX/320I plant operate at low enough vacuum (-5 kPa) to meet the LDAR definition for negative pressure vent systems. Most tanks operate at a slight negative pressure but for LDAR purposes their closed vent systems are treated as positive pressure systems.

All of the Group 1 tanks are fixed roof tanks and are equipped with a closed-vent system, which conveys emissions to a venturi scrubber (via two seal tanks). The collective gaseous emissions discharged by this scrubber are destroyed in the scrubber/thermal oxidizer/scrubber system described above for the Process Vents. The Group 1 tanks listed above are subject to the standards in §63.1362(c)(2)(iv)(A), which require a closed vent system and a control device that provides at least a 95% reduction in organic HAP emissions. The closed vent system must meet the requirements in §63.1362(j).

Initial compliance with these standards was demonstrated in accordance with §63.1365(d)(1)(i)(C), which pertains to control devices that also control process vents. This standard states that if compliance with §63.1362(b) provisions is demonstrated according to the provisions of §63.1365(c), and the demonstrated percent reduction is greater than or equal to 95%, then no performance test is required to demonstrate initial compliance for the Group 1 storage vessels. These conditions were met, as discussed in the Process Vent section above. Initial compliance with §63.1362(c)(5) is demonstrated by including the anticipated periods of planned routine maintenance for the first reporting period in the Notification of Compliance Status report as specified i §63.1368(f). §63.1368(f) requires that this report be submitted no later than 150 calendar days after the compliance date. Since these are one time requirements that have been satisfied, they are not included in this Operating Permit.
Continued compliance is demonstrated using the same requirements discussed above for the Process Vents.

Table 3: Emissions path for wastewater tanks in the Pyrrole/XXXXX/320I Production Plant

EU#	Point #	Unit Description	Process #	Vapor Emissions	Wastewater
EU0023	PY-06	Waste Storage Section 633: Acidic Aqueous Storage Tank	633-006	Closed vents which are vented through a venturi scrubber, then to the scrubber/thermal oxidizer/scrubber system described above.	Pumped to 633-401.
EU0024	PY-06	Waste Storage Section 633: Basic Waste Hold Tank	633-001		Pumped to 633-401.
EU0025	PY-06	Waste Storage Section 633: Organic Waste Hold Tank	633-004		Pumped to 633-421.
EU0026	PY-08	Waste Storage Section 633: Floor Drain Hold Tank	633-012	Vented through a voluntary carbon canister to the atmosphere.	Pumped to 633-001.
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank	633-401	See North Waste Management Area	
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank	633-421		

Note 1:Tanks 633-401 (Pyrrole aqueous waste hold tank) and 633-421 (Pyrrole organic waste hold tank) are located in the North Waste Management Area. The vapor emissions and wastewater held in these tanks is incinerated in one of the RCRA incinerators. These tanks are discussed further in the North Waste Management Area section of this document.

c) Wastewater
§63.1362(d) contains the standards for wastewater, which require compliance with §63.132 through §63.147, with the differences detailed in §63.1362(d)(1) through (16). The permit condition does not contain §63.1362(d)(1) through (16). The modifications to §63.132 through §63.147 that are detailed in §63.1362(d)(1) through (16) are incorporated into the provisions of §63.132 through §63.147 that appear in the permit condition. The applicability of §§63.132 through 63.147 to the Pyrrole/XXXXX/320I production plant is discussed below:

§63.132-Process wastewater provisions-general:

The installation has completed the determination/designation process for Group 1 or 2 tanks. Therefore, the requirements of §63.132(a)(1), (c), (e), and (f) do not appear in the permit. §63.132(b) applies to new sources, and does not appear in the permit because all sources satisfy the definition of existing.§63.132(d) does not apply because the compounds listed in Table 8 are not regulated by 40/63 MMM [see §63.1362(d)(9)]. §63.132(g) does not apply because BASF does not have off site treatment or on site treatment owned by another installation. The requirements of §63.132(a)(2) apply, however the installation is exempt from §63.132(a)(2)(iii) [see §63.138(h)] The control requirements in §63.132(a)(2)(ii), the recordkeeping requirements of §63.132(a)(2)(iii) and the reporting requirements of §63.132(a)(2)(iii) are not included because they reference §63.138, §63.146, and §63.147, respectively. The applicability of those sections are discussed below.

§63.133-Process wastewater provisions-wastewater tanks:

§63.133(a) applies to each Group 1 wastewater tank, in compliance with either §63.133(a)(1) or (2), as specified in Table 10. However, the requirements for Table 10 can only be applied to the HAPs that appear in Table 9 of Subpart G [see §63.1362(d)(15)] Table 10 details the control requirements based on the tank capacity and the vapor pressure of the contents. Tanks 633-006 and 633-012, considering their size, design, and use, are subject to the provisions of §63.133(a)(1), which requires a fixed roof. Tanks 633-004 and 633-001, considering, their size, design, and use, are subject to the provisions of §63.133(a)(2)(i), which requires a fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the tank to a control device. All tanks must comply with the inspection and repair schedules detailed in §63.133(f), (g)(1)(ix), (g)(3), and (h). Tanks 633-004 and 633-001 must also comply with§63.133(b).

Table 4-Table 10 to Subpart G of Part 63-Compliance Options for Wastewater Tanks

Capacity (m^3)	Maximum true vapor pressure (kPa)	Control requirements
<75		§63.133(a)(1)
>75 and <151	<13.1	§63.133(a)(1)
	>13.1	§63.133(a)(2)
>151	<5.2	§63.133(a)(1)
	>5.2	§63.133(a)(2)

Note: The maximum true vapor pressures in Table 10 are limited to the HAP listed in Table 9 of 40 CFR Part 63 Subpart G [see §63.1362(d)(15)]

§§63.134, 63.135, §63.136 and 63.137 contain the wastewater provisions for surface impoundments, containers, individual drain systems, and oil-water separators, respectively.

These do not exist at the Pyrrole/XXXXX/320I production plant. Therefore these standards do not appear in this Operating Permit.

§63.138-Process wastewater provisions-performance standards for treatment processes managing Group 1 wastewater streams and/or residuals removed from Group 1 wastewater streams:

This section contains requirements for the control of both the gaseous emissions of wastewater and the wastewater itself. As detailed in Table 3 the vapor emissions are controlled by the same scrubber/thermal oxidizer/scrubber system that is used for process vents. As applied to this control system, the control requirements in 40 CFR Part 63 Subpart MMM are more stringent than those required by 40 CFR Part 63 Subpart G.

Therefore the requirements in 40 CFR Part 63 Subpart G that would apply to the scrubber/thermal oxidizer/scrubber system are not included in the permit. The wastewater itself is incinerated in the on-site RCRA incinerators.. §63.138(h)(1) contains the requirements that must be met for the hazardous waste incinerator. These conditions have been met, and therefore, these tanks are exempt from the design evaluation or performance test requirements in §63.138(a)(3) and §63.138(j), from the monitoring requirements of §63.132(a)(2)(iii) and §63.132(b)(3)(iii), as well as the recordkeeping and reporting requirements associated with monitoring and performance tests. [see §63.138h]

§63.139-Process wastewater provisions-control devices:

Since the installation's RCRA incinerators satisfy the requirements of §63.139(d)(4)(iv), it is exempt from §63.139(d)(1) through (3), §63.139(e), and §63.6(f) of subpart A [see §63.139(d)(4)] The provisions of §63.139(f) are included in the permit.

§63.140-Delay of repairs: All sections have been included in the Operating Permit.

§63.141-63.142 are reserved, and therefore do not appear in the permit.

§63.143-Process wastewater provisions-inspections and monitoring of operations:

The installation is exempt from these requirements, see §63.139(e) and §63.139(d)(4)(iv).

§63.144-Process wastewater provisions-test methods and procedures for determining applicability and Group 1 or 2 determinations:

This section contains two options, to determine the status, or to designate as Group 1. The installation has chosen to designate all wastewater streams in the Pyrrole/XXXXX/320I plant as Group 1, therefore the requirements of this section have not been included in this Operating Permit.

§63.145-Process wastewater provisions-test methods and procedures to determine compliance:

Due to the overlapping requirements between 40 CFR Part 63 Subpart MMM and 40 CFR Part 63 Subpart G regarding the scrubber/thermal oxidizer/scrubber system, the provisions of §63.145 that would apply to the system are not included in the permit. Performance testing and compliance of this system is discussed in the process vent section of Subpart MMM. Since the installation uses the RCRA incinerators to comply with §63.138, neither a design evaluation or performance test of the RCRA units is required. [see §63.145(a)(1)]. Therefore, the requirements of this section are not included in the permit.

§63.146-Process wastewater provisions-reporting:

Due to the overlapping requirements between 40 CFR Part 63 Subpart MMM and 40 CFR Part 63 Subpart G regarding the scrubber/thermal oxidizer/scrubber system, the provisions of §63.146 that would apply to the system are not included in the permit. Since the installation's RCRA incinerators satisfy the requirements of §63.139(d)(4)(iv), it is exempt from the monitoring requirements in this section. Therefore, this section does not appear in the permit.

§63.147-Process wastewater provisions-recordkeeping:

§63.147(a) is not included in the permit because the installation is not transferring streams as detailed in §63.132(g). The standards in §63.147(b)(1), and (7), are included in the Operating Permit. §63.147(c), (d), and the other sections of §63.147(b) are not included in the permit because they contain requirements for control devices that are not used in the Pyrrole/XXXXX/320I production plant. §63.147(b)(2) is not included due to

the overlapping requirements of Subpart MMM and Subpart G regarding the scrubber/thermal oxidizer/scrubber system. §63.147(e) does not apply because the installation has not requested alternative monitoring or recordkeeping from the Administrator. §63.147(f) does not apply because the installation has chosen to designate all wastewater streams as Group 1 wastewater streams.

d) Bag Dumps and Product Dryers
§63.1362(e) contains the requirements for bag dumps and product dryers. (e)(1) applies to product dryers that dry a PAI or integral intermediate that is a HAP. (e)(2) applies to bag dumps that introduce to a PAI process unit a feedstock that is a solid material and a HAP. These sections do not apply, as there are no solid HAP intermediates used in the process. (e)(3) requires that gaseous HAP emissions from bag dumps and product dryers be controlled by the provisions in §63.1362(b). The emissions from the subject batch dryer are vented to the scrubber/thermal oxidizer/scrubber system in compliance with §63.1362(b)(2)(ii), which requires that uncontrolled organic HAP emissions from the vents be reduced by 98% by weight or greater. This is the same requirement found in §63.1632(b)(2)(ii)(A), for the Process Vents. Therefore, the requirements of §63.1362(e)(3) appear in the Operating Permit.

e) Heat Exchangers
§63.1362(f) contains the requirements for heat exchangers. It states that if the heat exchanger meets one of more of the options presented in §63.104(a)(1) through (6) then it is not subject to the monitoring requirements presented in §63.1362(f). All heat exchanger systems, except one, in the Pyrrole/XXXXX/320I production plant meet the requirements of §63.104(a)(1) which requires the heat exchange system to be operated with the minimum pressure on the cooling water side at least 35 kPa greater than the maximum pressure on the process side. The single exchanger which does not meet this requirement is subject to §63.1362(f), which offers two compliance options: §63.140(b) or (c). Both of these have been included in the Operating Permit to offer flexibility.

2. Sections §63.1362(g), (h), and (k):The provisions of §63.1362(g), (h), and (k) have not been included in the Operating Permit because the installation has chosen not to use the pollution prevention alternatives in (g), or the emissions averaging provisions in (h). The installation does not have the certain process streams addressed in (k).
3. Section §63.1362(i), (j), and (l):The provisions of §63.1362(i) Opening of Safety Devices, (j) Closed vent systems, and (l) Exemption for RCRA units have been included in this permit. §63.1362(j)(1) and (2) have been included in the Operating Permit to offer flexibility.
4. Emission Standards: Equipment Leaks [§ 63.1363]
There are exemptions used under the LDAR portion of the regulation. These include:
   - Pumps in light liquid service with double mechanical seals and pressure monitoring on the seal barrier fluid;
   - Ceramic (e.g., porcelain, glass, or glass-lined) lined connectors
   - Systems in utility service
   - Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible

   §63.1363(b) states that the installation must comply with the provisions of 40 CFR Part 63 Subpart H, and contains modifications to specific sections of 40 CFR Part 63 Subpart H. For simplicity, the provisions of 40 CFR Part 63 Subpart H are presented in the Permit Condition. When the provisions of Subpart H were modified per §63.1363(b), both the source of the regulation and the modification are cited. The applicability of 40 CFR Part 63 Subpart H is described below:

Table 5: Applicability of 40 CFR Part 63 Subpart H to the Pyrrole/XXXXX/320I Production Plant

Section	Included in permit	Notes
63.160	No	Per 63.1363(b)(1)(i) this section does not apply. The permittee shall comply with 63.1363(a)
63.161	No	Per 63.1363(b)(1)(ii) this section does not apply. The permittee shall comply with 63.1361.
63.162	No	Per 63.1363(b)(1)(i) this section does not apply. The permittee shall comply with 63.1362(a)
63.163	No	Per 63.1363(b)(1)(ii) this section does not apply. The permittee shall comply with 63.1363(c).
63.164	Yes	None
63.165	Yes	None
63.166	Yes	None
63.167	No	Per 63.1363(b)(1)(iv) this section does not apply. The permittee shall comply with 63.1363(d).
63.168	No	Per 63.1363(b)(1)(v) this section does not apply. The permittee shall comply with 63.1363(e).
63.169	Yes	None
63.170	No	Per 63.1363(b)(1)(vi) this section does not apply. The permittee shall comply with 63.1362(b).
63.171	Yes, with modifications	Modified as specified in 63.1363(b)(3)(i). 63.171(d)(1) not included as it references 63.176(d), which does not apply per 63.1363(b)(1).
63.172	Yes, with modifications	Modified as specified in 63.1363(b)(3)(ii)(A).
63.173	No	Per 63.1363(b)(1)(iii) this section does not apply. The permittee shall comply with 63.1363(c).
63.174	Yes, with modifications	Modified as specified in 63.1363(b)(3)(iii). 63.174(c)(2)(ii) not included as it applies to installations which are subject to 40 CFR part 63 Subparts F and I, which have screwed connectors installed prior to 12/31/1992. Pyrrole plant is not subject to subparts F or I, and was constructed after 12/31/92.
63.175	No	Per 63.1363(b)(1) this section does not apply.
63.176	No	Per 63.1363(b)(1) this section does not apply.
63.177	No	Permittee is not using this alternative.
63.178	Yes	Included to provide operational flexibility.
63.179	No	Permittee is not using this alternative.
63.180	Yes	Included to provide operational flexibility.
63.181	No	Per 63.1363(b)(1)(vii) this section does not apply. The permittee shall comply with 63.1363(g).
63.182	No	Per 63.1363(b)(1)(vii) this section does not apply. The permittee shall comply with 63.1363(h).
63.183	No	Not referenced by 63.1363(b).

5. Compliance Dates [§63.1364]
   This section is not included in the Permit Condition because the permittee has fulfilled the requirements of this section by the appropriate deadlines.
6. Test Methods and Procedures [§63.1365]
   These provisions have not been included in the permit condition because they have already been satisfied. The RCRA incinerators are tested under 40 CFR Part 63 Subpart EEE, and the scrubber/thermal oxidizer/scrubber system has been tested.
7. Monitoring and Inspection Requirements [§63.1366]
   The applicable provisions of this section have been included in the permit condition. These requirements pertain to the control devices. The provisions for devices not used at this installation have not been included.
8. Recordkeeping Requirements [§63.1367]
   These provisions appear in the permit, with the following exceptions:
   §63.1367(a)(2) Applies if 40 CFR Part 63 Subpart MMM does not apply.
   §63.1367(b)(6)(vi) Applies to emissions averaging, which is not used at the Pyrrole/XXXXX/320I plant,
   §63.1367(b)(11) Applies to floating roofs. All affected tanks are fixed roof.
9. Reporting Requirements [§63.1368]

These provisions appear in the permit, with the following exceptions:

§63.1368(h)(2)(ii) Applies if upgrading from small control device to large. There are no small control devices at the Pyrrole/XXXXX/320I plant.

§63.1368(f) Notification of Compliance requirements have been satisfied.

Other Regulatory Determinations

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*

1. Process Descriptions
   (A) Emission Point PY-03 (EU0029)-Raw material unloading baghouse
   (B) Emissions from this source are generated from the loading of dry materials for either the Pyrrole or XXXXX processes, which consists of drum and IBC charging. There is a required HEPA filter installed downstream of the baghouse.
   (C) Emission Point PY-05 (EU0030 & EU0031)-Product packaging baghouse
   (D) Emissions from this source are generated from the packaging of dry Pyrrole, XXXXX, or 320I product. The product is discharged from the dryer and put into supersacks using a supersack filler station. There is a required HEPA filter installed downstream of the baghouse.
   (E) Emission Point PY-11 (EU0047)-Raw material baghouse
   (F) Emissions from this source are generated from the unloading of dry raw material from supersacks. There is a voluntary HEPA filter installed downstream of the baghouse. The removal efficiency of the HEPA filter has not been included in the compliance demonstration, therefore its' operation is voluntary.
   (G) Emission Point PY-14-(EU0048) Raw material baghouse
   (H) Emissions from this source are generated from the batch product dryer (process # 180-029) and the product transfer system during Pyrrole, XXXXX, or 320I production. There is a required HEPA filter installed downstream of the baghouse.
   (I) Emission Point PY-15 (EU0049)-Raw material baghouse
   (J) Emissions from this source are generated from the drum dump station. There is a required HEPA filter installed downstream of the baghouse.
   (K) Emission PY-16 (EU0050)-Raw material handling, controlled by scrubber
   Emissions from this source are generated from the handling of potassium methoxide powder.
2. Exemptions: 10 CSR 10-6.400(1)(B)11. exempts emission units that have potential emissions of less than 0.5 lbs PM/hr. All of the particulate matter emission units in the Pyrrole plant meet this exemption, as shown in the table below:

Table 6: Applicability of 10 CSR 10-6.400 to Pyrrole plant

EU #	Equipment Description	PM PTE (lb/hr)	Maximum Hourly Design Rate Pyrrole (tons/hr)	MMPDC (tons/hr)	320I (tons/hr)
EU0029	Dry Material Unloading	0.43	0.33	0.63	NA
EU0030 & EU0031	Process Section 180: Product Supersack Filler Process Section 180: Swivel Drum Filler	0.43	0.17	0.66	0.79
EU0047	Raw Materials Handling System: Dry Material Unloading	0.43	0.05	0.20	NA
EU0048	Raw Materials Handling System: Dry Material Unloading	0.32	NA	1.15	NA
EU0049	Raw Materials Handling System: Dry Material Unloading	0.32	NA	0.07	0.60
EU0050	Raw Materials Handling System: Potassium Methoxide Receiving	0.11	NA	NA	1.29

THIMET®/COUNTER® Plant (owned by AMVAC, operated by BASF for AMVAC)

Plant Overview

The THIMET and COUNTER process was installed under construction permit 0276-003. An emergency back up propane fired flare for this plant was construction under permit 0778-041. A second emergency back up flare was permitted under permit 0988-004A.

The installation was authorized to provide on site formulation of technical grade materials into finished products under permit 0588-007A. Construction permit 0793-001 authorizes modifications to the process permitted by permit 0588-007A. These pelletizing operations have been shutdown and dismantled.

Raw Materials Handling:

Section 110 consists of raw material storage tanks at the THIMET®/COUNTER® Plant, which contain XXXX. This section also contains a XXXX storage tank (process #110-004) and an XXXX storage tank (process #110-014). All tanks in this section are vented to a Storage Seal Tank (process # 631-006).

This Storage Seal Tank (process #631-006) also collects from the Product Storage Section #150 and the Waste Holding Section 633. The Purge Water Tank (process #120-120) is no longer in service. This seal tank is primarily vented to the D Incinerator. If the incinerator goes down, emissions are routed to the Closed Flare (process #631-050). If the Incinerator and Closed Flare are both down, then emissions are vented to the Open Flare (process #631-012). Both of these flares are fired on natural gas, and are accounted under EP TC-03A, and TC-03, respectively. The D Incinerator is grouped with the South Waste Management System, and is explained in greater detail elsewhere. Emission points TC-01 and TC-02 represent emissions from the South Waste Management System packed tower stack (process #633-000) and the oxidation tower (process #633-019), respectively.

Chemical Manufacturing:

The manufacture of these products can be considered to be the reactions, in several stages, of several different chemicals. Process Sections 120, 130, and 140 are all interrelated process steps for the production of two insecticide products, THIMET and COUNTER. These steps include the addition of various organic raw materials together with inorganic and caustic materials. The process steps include heating/cooling cycles, mixing, phase separation, stripping, etc. Process Section 120 has a separate venturi scrubbing system (process #631-018) for removal of particulates from loading a dry raw material into this step of the process. These emissions are accounted for under emission point TC-04. Emissions from this process section are also sent to a DETA Seal Tank (process #120-017), which is then vented to the “D” Incinerator. Process Sections 130 and 140 are vented to a condensation seal tank (process #631-004), which releases to the “D” Incinerator.

Storage/Miscellaneous Units:

Product Storage Section 150 consists of final product storage tanks. There are various other tanks, which are listed individually in tables elsewhere. The Waste Solution Hold Tank (process #631-035) is out of service.

Construction Permit History:
All air permitting actions are discussed below in chronological order. The description is presented as it was at the time of permitting. Any changes to the regulatory determinations made in these permits are addressed elsewhere in this document.

1. Construction Permit 0276-003
   This permit was issued March 2, 1976 to authorize construction of manufacturing facilities for PROWL®, HERBICIDE®, THIMET® Soil and Systemic insecticide and COUNTER® Soil insecticide. This permit does not contain any special conditions.
2. Construction Permits 0778-038 through 0778-041
   All these permits were issued in one document which contains four emission sources, with a permit number for each source. Source #1 is the 350 ton/day nitric acid production facility (aka the Weatherly Nitric Acid Plant), Source #2 is a storage tank controlled by a caustic scrubber, Source #3 is a lime storage silo with a baghouse (99% control), Source #4 is an emergency back up propane fired flare at the THIMET®/COUNTER® plant. The nitric acid production plant was shut down July 1998, therefore it does not appear this operating permit. However Source #4 is still on site. This construction permit does not contain any special conditions.
   At the time of permit issuance, the State of Missouri did not have the authority to issue Prevention of Significant Deterioration (PSD) permits. Therefore, the permitting of Source #1 was in the jurisdiction of two agencies-MDNR APCP issued a construction permit for the pollutants which did not require PSD, and the U.S. EPA issued the PSD permit for the pollutants which required PSD permitting (see U.S. EPA Permit 1179).
3. Construction Permit 0588-007A
   This construction permit was issued April 26, 1988 to authorize construction of a facility to provide on-site formulation of technical grade materials into finished products. The installation will implement a polyvinylchloride based finishing operation for the insecticides THIMET® and COUNTER®. The method will apply technical grade THIMET® or COUNTER® to PVC, extrude the PVC through dies, and chop the PVC extrusion into small pellets. These operations have been shutdown and dismantled. Therefore, this Construction Permit does not appear in the Operating Permit.
4. Construction Permit 0988-004A
   This construction permit was issued August 15, 1988 to authorize construction of an emergency back up flare to control odors from the pesticide manufacturing facilities. This flare, a John Zinc EEF-U-4 and EEF-AR-4 unit, will be a back up to the existing primary incinerator and existing stand by flare. The existing THIMET®/COUNTER® manufacturing facility uses XXXX-type chemicals as raw feedstocks, which are extremely odorous and detectable at very low concentrations in the ambient air. This back up flare is being installed to assure the ability to control these emissions from the THIMET®/COUNTER® production area and the waste management area. This flare is designed to destroy at least 98% of the hydrogen sulfide, XXXX, and other chemicals fed to it. The pilot flame will consume approximately 0.77 MMCF annually. The primary burner is rated at a heat input of 17 MMBtu/hr at full fire. The flare will burn natural gas. This permit does not contain any special conditions, nor does it apply any federal regulations.
5. Construction Permit 0793-001
   This permit was issued July 7, 1993 to authorize construction of coating equipment. The process permitted by CP #0588-007A has been installed, but is not performing as desired. The small pellets tend to have a limited shelf life due to agglomeration. The permittee has requested to install a facility to coat the pellets with calcium carbonate. This coating will lessen the tendency to

agglomerate and will extend product shelf life. These operations have been shutdown and dismantled. Therefore, this Construction Permit does not appear in the Operating Permit.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

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.

Table 7: Applicability Determinations for 40 CFR Part 60 Subparts K, Ka, and Kb for the THIMET/COUNTER plant

EU#	Point #	Unit Description	Process #	Explanation
w/o	TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: XXXX Storage Tank, 30,600 gallon capacity, installed 1976.		Not subject to K, Ka, or Kb; see note 1
w/o	TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: XXXX Storage Tank, 30,600 gallon capacity, installed 1976.		Not subject to K, Ka, or Kb; see note 1
w/o	TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: XXXX Storage Tank, 7,500 gallon capacity, installed 1976.		Not subject to K, Ka, or Kb; see note 1
EU0056	TC01/TC-02/TC-03/TC-03A	XXXX Storage Tank, 30,600 gallon capacity, installed 1976.	110-004	Not subject to K, Ka, or Kb; see note 1
EU0053	TC01/TC-02/TC-03/TC-03A	XXXX Storage Tank, 32,400 gallon capacity, installed 1993.	110-014	Subject to Kb
EU0057	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank, 250,000 gallon capacity, installed 1976.	150-001	Not subject to K, Ka, or Kb; see note 1
EU0058	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank, 41,600 gallon capacity, installed 1976.	150-003A	Not subject to K, Ka, or Kb; see note 1
EU0059	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank, 41,600 gallon capacity, installed 1976.	150-003B	Not subject to K, Ka, or Kb; see note 1
w/o	TC01/TC-02/TC-03/TC-03A	Storage Seal Tank, 870 gallons, 1976.	631-006	Not subject to K, Ka, or Kb; see note 1
w/o	TC-06	Caustic Storage Tank, 50,500 gallon capacity, installed 1976	110-001	Not subject to K, Ka, or Kb; see note 1
w/o	TC-08	Copper Solution Weigh Tank, 643 gallon capacity, installed 1976	140-027	Not subject to K, Ka, or Kb; see note 1
w/o	TC-09	Soda Ash Slurry Tank, 83,300 gallon capacity, installed 1976	633-055	Not subject to K, Ka, or Kb; see note 1
w/o	TC-10	0 Degree Brine Expansion Tank (Ethylene Glycol), 50 gallons, 1976	605-003	Not subject to K, Ka, or Kb; see note 1
w/o	TC-11	20 Degree Brine Expansion Tank (Ethylene Glycol), 625 gallons, 1976	605-006	Not subject to K, Ka, or Kb; see note 1
w/o	TC-12	Soft Water Storage Tank, 15,000 gallon capacity, installed 1976	110-017	Not subject to K, Ka, or Kb; see note 1
w/o	TC-13	Diesel Fuel Storage Tank(process bldg), 300 gallon capacity, installed 1976	671-121	Not subject to K, Ka, or Kb; see note 1
w/o	TC-15	Mix Tank, 2000 gallons, 1976	633-006	Not subject to K, Ka, or Kb; see note 1
w/o	TC-16	Diesel Fuel Storage Tank (TRANE), 500 gallon capacity, installed 1976	631-053	Not subject to K, Ka, or Kb; see note 1

Note 1: The liquid contained in the tank does not meet the definition of petroluem liquid (for K, Ka, or Kb), or the definition of a volatile organic liquid (for Kb).
Note 2: The tank does not satisfy the size requirements in the applicability section of the rule.
Note 3: Process tanks are exempt.
Note 4: These tanks are subject to 40 CFR Part 63 Subpart MMM, and as such are required to comply only with the provisions of that MACT. [see 63.1360(i)(3)]

EU0053-XXXX Storage Tank satisfies the applicability of this regulation, as detailed in §60.110b(a), but does not meet any of the specifications detailed in §60.112b. Therefore, it is only subject to the recordkeeping and monitoring provisions of §60.116b(b). This tanks is vented to a Storage Seal Tank (process # 631-006), as detailed above.

Maximum Available Control Technology (MACT) Applicability
40 CFR Part 63 Subpart MMM-National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

THIMET® and COUNTER® Manufacturing Facility:

These products are organophosphate insecticides. The chemistry is the same for each product, with the exception of one raw material. These products are not made simultaneously. Uncontrolled emissions from the process vents are routed to a common fume handling system via seal tanks. In the normal operating mode, these emissions are then conveyed to the "D" hazardous waste incinerator where they are destroyed in accordance with §63.1362(c)(2)(iv)(A). If the "D" incinerator is not operational, then the seal tank emissions are diverted automatically to the closed flare to control odorous substances, VOC and HAP emissions. The flare meets the requirements of §60.11(b). An open flare is also installed to backup the closed flare to control odors. Additionally, the production process is placed into hold safe position (following the SSM plan). Production process reactions are not permitted to resume until the fume destruction capability of the "D" incinerator is restored. The combination of process vents from this existing process is designated as a large, Group 1 process vent. The "D" incinerator is exempt from initial compliance demonstrations and monitoring provisions under §63.1362(l)(2). The applicability of this regulation is detailed in the table below.

The flares have not been performance tested because they are not the primary control devices. Pursuant to 40 CFR 63.1360(e), the provisions of Subpart MMM apply during all periods except startup, shutdown, and malfunction (SSM). The two backup flares only operate during an SSM event related to the primary control device (i.e., D Incinerator); thus, the flares are not operated as control devices for the purposes of complying with Subpart MMM. Specifically, during SSM events, the SSM plan procedures are initiated and the emissions could be routed to the flares as an additional means of control, though the flares are not required by Subpart MMM. The flares are not used as control devices during normal operation.

Table 8: Applicability of 40 CFR Part 63 Subpart MMM to the THIMET/COUNTER Production Plant

EU#	Point #	Unit Description	Process #	Explanation
EU0051	TC01/TC-02	Process Section 130		Subject to MMM as a process vent
EU0052	TC01/TC-02	Process Section 140		Subject to MMM as a process vent
w/o	TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: XXXX Storage Tank, 30,600 gallon capacity, installed 1976.		Not subject to MMM-see Note 1
w/o	TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: XXXX Storage Tank, 30,600 gallon capacity, installed 1976.		Not subject to MMM-see Note 1
w/o	TC01/TC-02/TC-03/TC-03A	Raw Material Storage Section 110: XXXX Storage Tank, 7,500 gallon capacity, installed 1976.		Not subject to MMM-see Note 1
EU0056	TC01/TC-02/TC-03/TC-03A	XXXX Storage Tank, 30,600 gallon capacity, installed 1976.	110-004	No applicable requirements, see Note 4
EU0053	TC01/TC-02/TC-03/TC-03A	XXXX Storage Tank, 32,400 gallon capacity, installed 1993.	110-014	Not subject to MMM-see Note 1
EU0057	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank, 250,000 gallon capacity, installed 1976.	150-001	No applicable requirements, see Note 4
EU0058	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank, 41,600 gallon capacity, installed 1976.	150-003A	No applicable requirements, see Note 4
EU0059	TC01/TC-02/TC-03/TC-03A	Product Storage Section 150: Storage Tank, 41,600 gallon capacity, installed 1976.	150-003B	No applicable requirements, see Note 4
w/o	TC01/TC-02/TC-03/TC-03A	Storage Seal Tank, 870 gallons, 1976.	631-006	Not subject to MMM-see Note 1
EU0054	TC01/TC-02/TC-03/TC-	Waste Holding Section 633		Subject to MMM as a wastewater tank-See South Waste Management Area
EU0055	TC01/TC-02/TC-04	Process Section 120		Subject to MMM as a process vent
w/o	TC-05	Soda Ash Unloading	633-054	Not subject to MMM-see Note 3
w/o	TC-06	Caustic Storage Tank, 50,500 gallon capacity, installed 1976	110-001	Not subject to MMM-see Note 1
w/o	TC-08	Copper Solution Weigh Tank, 643 gallon capacity, installed 1976	140-027	Not subject to MMM-see Note 1
w/o	TC-09	Soda Ash Slurry Tank, 83,300 gallon capacity, installed 1976	633-055	Not subject to MMM-see Note 1
w/o	TC-10	0 Degree Brine Expansion Tank (Ethylene Glycol), 50 gallons, 1976	605-003	Not subject to MMM-see Note 1
w/o	TC-11	20 Degree Brine Expansion Tank (Ethylene Glycol), 625 gallons, 1976	605-006	Not subject to MMM-see Note 1
w/o	TC-12	Soft Water Storage Tank, 15,000 gallon capacity, installed 1976	110-017	Not subject to MMM-see Note 1
w/o	TC-13	Diesel Fuel Storage Tank (process bldg), 300 gallon capacity, installed 1976	671-121	Not subject to MMM-see Note 1
w/o	TC-15	Mix Tank, 2000 gallons, 1976	633-006	Not subject to MMM-see Note 1
w/o	TC-16	Diesel Fuel Storage Tank (TRANE), 500 gallon capacity, installed 1976	631-053	Not subject to MMM-see Note 1
w/o	TC-18	Propane Vaporizers		Not subject to MMM-see Note 2

Note 1: These tanks do not meet the criteria (or definition of) a Group 1 storage vessel, or are exempt under the definition of a storage vessel (see §63.13610).

Note 2: These activities are not covered under this regulation.
Note 3: These operations are not subject to MMM because these processes do not emit HAPs.
Note 4: The MACT contains two categories of storage vessels: Group 1 and Group 2. Although these tanks are subject to the MACT, as Group 2 storage vessels, they have no applicable requirements.

Other Regulatory Determinations

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*
10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*
EU0056-Soda Ash Unloading (process #633-054): In this process, soda ash is discharged into a pan placed under the car which directs the soda ash to a hydrator and the soda ash solution is pumped to a storage tank. There is a shroud around the pan and some fugitive dust from this operation. There is no exhaust gas or control device. There are fugitive PM10 emissions from unloading soda ash from rail cars into a hydration system.
Fugitive emissions are exempt from 10 CSR 10-6.400 per 6.400(1)(B)7. 10 CSR 10-6.220 is not applied to fugitive sources as a practical matter.

TC-01 – Fume incineration
MDNR Permit No. 0488-001 was issued for the construction of a sulfuric acid regeneration (SAR) plant at the BASF Agri Chemicals - Hannibal Plant. Permit Condition #5 stated that "(t)he incineration of hydrogen sulfide fumes in the THIMET/COUNTER incinerator shall cease upon startup of this facility, and any piping or other means facilitating such incineration shall be rendered inoperable for this purpose." The hydrogen sulfide fumes were to be directed to the new sulfuric acid regeneration facility. The applicant took this approach because it wished to provide "offset emissions" for the SAR plant – without sufficient emissions offsets, the SAR plant's construction permit would have resulted in review under the PSD requirements. Because the applicant was able to provide sufficient emissions offsets, it avoided review under the PSD requirements. This approach is sanctioned within the construction permit rule, but does require that the "offset emissions" be permanent and enforceable. In this case, the discontinuation of incineration of these fumes was to achieve a reduction of an estimated 53 tons per year of sulfur dioxide emissions. By recovering the sulfur contained in these hydrogen sulfide fumes in the SAR plant, rather than incinerating the fumes, the emissions of sulfur dioxide from the installation were reduced by 53 tons per year. The reduction of the 53 tons per year of sulfur dioxide fumes was a portion of the commitment by BASF Agri Chemicals - Hannibal Plant to achieve net sulfur dioxide reductions at the Hannibal Plant equivalent to the projected increases in emissions associated with the sulfuric acid plant operation.

However, in the construction permit application for the sulfuric acid regeneration plant, the applicant did not take into account the amount of steam that would be generated by the sulfuric acid recovery plant's heat recovery boiler. The sulfuric acid recovery plant's heat recovery boiler generates so much steam that the installation saw that it could reduce the amount of steam generated by the plant's on-site steam generating boilers. This results in a subsequent reduction in sulfur dioxide emissions from the on-site boilers, which combust sulfur containing fuels. In fact, over twenty percent of the plant's steam requirements are provided from the sulfuric acid regeneration plant.

Because of the amount of steam generated by the sulfuric acid recovery plant's heat recovery boiler, the installation has been able to achieve sulfur dioxide emission reductions from the plant's on-site steam generating boilers that are more than equivalent to the 53 ton per year commitment associated with not burning the hydrogen sulfide fumes in the "D" incinerator (TC-01). Based on this equivalent sulfur

dioxide emission reduction, the applicant desires to reinstate the option of burning the hydrogen sulfide fumes from the THIMET® and COUNTER® Plant in either the sulfuric acid regeneration plant (PR-51) or the "D" incinerator (TC-01). This will not have any effect on overall sulfur dioxide emissions from the Hannibal Plant as they were provided in the original construction permit for the sulfuric acid regeneration plant. BASF Agri Chemicals - Hannibal Plant will include sulfur dioxide emissions from these sources as a part of the Hannibal Plant's annual Emission Inventory Questionnaire. In this case, the request to nullify Condition #5 of NSR permit 0488-001, the requirement to cease the incineration of the hydrogen sulfide fumes under discussion here, is granted. Had the applicant taken note of the quantity of steam generated by the SAR plants heat recovery boiler in its initial NSR application, this request would have been granted at that time.

IMI-1 Plant

Plant Overview

The IMI-1 plant was originally permitted under construction permit 0885-005. The IMI-1 plant is a manufacturing operation for the production of the imidazolinone herbicide. Initially, two different herbicides of the imidazolinone family were produced - SCEPTER and ARSENEL. SCEPTER was marketed for soybean weed control, and ARSENEL was marketed for brush control and forest management. Construction permit 0694-008 authorized the construction of an additional centrifuge, and allowed for an increase in the annual production rate at the IMI-1 Plant.

The caustic scrubber was installed to control XXXXX, which is generated by one of the reactions and which is a personnel safety concern. It is not the primary control device. The fumes from the caustic scrubber are treated in one the 3 incinerators in the North Waste Management area. The only time fumes go to atmosphere after passing through the caustic scrubber is during an SSM event involving the fume system.

The IMI-1 plant is an herbicide manufacturing facility that includes raw material handling, material storage, and the herbicide production facilities. Process Sections 120, 130, 140/150, 170 and 180 of the IMI-1 Plant are all interrelated process steps for the manufacture of a variety of herbicide products under the product family known as imidazolinones. These process steps include addition of various organic raw materials together with inorganic and acid/caustic materials. The process steps include various chemical reactions, heating/cooling cycles, mixing, precipitation, phase separation, etc. Process Section 160 consists of wet product centrifuges for final product separation prior to product drying.

All of these vessels vent through a common fume handling system that is operated under vacuum. The fume handling system consists of a combination of vent condensers, seal pots, and finally a scrubber system for emission control. Emissions from the IMI-1 Plant can be directed either to the acid scrubber (process #633-214) and/or the caustic scrubber (process #631-205), emissions from the scrubbers are further treated at the on-site incinerators. The aqueous and organic wastes from the various sections are contained in the aqueous waste hold tank (process #633-205) and organic waste hold tank (process #633-207) prior to being routed to the incinerators for destruction.

Process Section 190 is a closed-loop drying system for final product drying. This system is controlled by a baghouse (process #631-025) followed by a direct contact condenser (process # 190-005) The dried product is packaged typically in large volume supersacks; however can also be packaged in fiber drums. The Packaging Operations Section 190 and Solids Handling Section 200 are vented to baghouses

(process #'s 631-025 and 190-019X). The baghouse emissions are then directly vented to HEPA filters (process #'s 631-027 and 190-003X), which provide emission points IMI1-08 and IMI1-09.

The formulation vessels (process #'s 200-001 and 200-037) provide a system to complete initial formulations of a variety of herbicide products. Dry formulation raw products (e.g. herbicide active ingredients, urea, and others) are added to the liquid in the formulation vessels. The material is mixed, analyzed, and then transferred to the CPC Plant for final formulations and packaging. Dry formulation equipment includes the diacid hopper (process #120-017), solids charging conveyor (process #200-054), and urea charging hopper (process #200-006). Emissions from the dry raw material additives are controlled by baghouses (process #'s 631-018 and 631-310) followed by HEPA filters (process #'s 631-024X and 631-312), which provide emission points IMI1-05 and IMI1-10; or bag filters (process #'s 631-022 and 631-311), which provide emission points IMI1-12 and IMI1-12A. The majority of the emissions from the formulation vessels are directed to the IMI-1 Plant fume system under vacuum for treatment in the IMI-1 scrubbing system/ North Waste Management Area incinerator system.

On February 2, 2009, the APCP was notified that the following units were out of service:
IMI1-8 Raw materials handling system: Hopper (process #200-005A/B) and IMI1-8 Raw materials handling system: Solids Handling Section 200, which are both controlled by a baghouse (process #631-025) and a HEPA filter (process #631-027). Additionally, the bag filter (process #631-311) controlling IMI1-12A Solids Charging Conveyor (process #200-054) is out of service. The emissions from the Solids Charging Conveyor (process #200-054) are now routed to the baghouse (process #631-310) and HEPA filter (process #631-312) which control emissions from the Supersack Charging process, emission point IMI1-10.

There are ten storage tanks at the IMI-1 Plant ranging in capacity from 7,000 to 30,000 gallons. The XXXXX storage tank (process #110-001), sulfuric acid storage tank (process #110-025), and methyl isobutyl ketone (MIBK) storage tank (process #110-025) are vented directly to the atmosphere; the toluene storage tank (process #110-005) is vented through a condenser, and the XXXXX storage tank (process #110-008) is vented through an acid scrubber (process #632-214) followed by a caustic scrubber (process #631-205). Other storage tanks used in this plant include aqueous premix tank (process #200-034), final product storage tank (process #200-011), solvent storage tank (process #110-031), and multipurpose tanks (process #'s 110-034 and 110-014X).

Construction Permit History:
All air permitting actions are discussed below in chronological order. The description is presented as it was at the time of permitting. Any changes to the regulatory determinations made in these permits are addressed elsewhere in this document.

1. Construction Permit 0885-005A
   This permit was issued August 13, 1985, to authorize a new manufacturing operation for the production of imidazolinone, a herbicide. Initally, two different herbicides of the imidazolinone family will be produced, SCEPTER and ARSENAL. SCEPTER will be marked for soybean weed control, and ARSENAL will be marketed for brush control and forest management.
   The chemicals used in the production of imidazolinone consists of XXXXX, XXXXX, toluene, caustic soda, sulfuric acid, and hydrogen peroxide. The storage tanks for XXXXX, sulfuric acid, caustic soda, and hydrogen peroxide are vented directly to the atmosphere, while the toluene tank is vented through a condenser, and the XXXXX storage tank is vented through an acid scrubber

followed by a caustic scrubber. The manufacture of imidazolinone results in emissions from all phases of production. The particulate emissions from the dehydration/condensation section are routed to a baghouse, with the gaseous emissions from this and all other manufacturing sections being routed through various process vent condensers and seal pots, then combined and routed through an acid scrubber followed by a caustic scrubber. The emissions from the isolation/centrifuge section, which immediately precedes the final product drying section, are routed through a condenser, then to a caustic scrubber. The aqueous and organic wastes from the various sections are routed to the existing RCRA incinerators which also serve to control the wastes from the PROWL® and THIMET® production areas. The particulate emissions from the final product drying section are ducted to a baghouse (99.5% control efficiency), followed by a scrubber (99% control efficiency). This combination results in a combined control efficiency of 99.995%. The emission rates for this new construction are below the de minimis rates in 10 CSR 10-6.060. There are no NSPS or PSD requirements which apply to the new construction. This construction permit does not contain any special conditions. The operations authorized by this construction permit are currently referred to as the IMI-1 plant.

2. Construction Permit 0694-008
   This permit was issued June 8, 1994, to authorize the addition of a centrifuge in the IMI-1 facility. The modification will allow for an increase in the annual production rate. Emissions of VOC will be controlled by the PROWL® incinerators and the existing caustic scrubber system. This permit does not contain any federal regulations, however it does contain four special conditions, which were superceded by construction permit 102009-007.
3. Construction Permit #102009-007
   This permit was issued October 16, 2009, to authorize the installation of process equipment, piping, and instrumentation to remove a bottleneck to allow increased production of imidazolinone herbicides. This permit contains special conditions which appear as permit conditions in this operating permit. Previous to this permit, BASF had voluntarily installed HEPA filters and cartridge filter stacks downstream on emission points IMI1-05, IMI1-08, IMI1-09, and IMI1-10. This construction permit accounted for the pollution reduction provided by these additional filters. Therefore, the operation of these filters is no longer voluntary.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

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.

Table 9: Applicability of 40 CFR Part 60 Subparts K, Ka, and Kb to IMI1 plant

EU#	Point #	Unit Description	Process #	Explanation
EU0060	IMI-1 1	Toluene Storage Tank; 12,700 gallon capacity; Installed 1986	110-005	Not subject to K, Ka, or Kb; see note 2
EU0060a	IMI-1 2	MIBK Storage Tank; 8,000 gallon capacity; Installed 1986	110-025	Not subject to K, Ka, or Kb; see note 2
w/o	IMI-1 3	XXXX Storage Tank; 12,700 gallon capacity; Installed 1986	110-001	Not subject to K, Ka, or Kb; see note 1
w/o	IMI-1 4	Sulfuric Acid Storage Tank; 12,700 gallon capacity; Installed 1986	110-025	Not subject to K, Ka, or Kb; see note 1
EU0061	IMI-1 6A/B	XXXX Storage Tank; 30,000 gallon capacity; installed 1986	110-008	Not subject to K, Ka, or Kb; see note 2
EU0068	IMI-1 6A/B	Formulation Vessel	200-001	Not subject to K, Ka, or Kb; see note 2
EU0069	IMI-1 6A/B	Formulation Vessel	200-037	Not subject to K, Ka, or Kb; see note 2
EU0070	IMI-1 6A/B	Aqueous Waste Hold Tank	633-205	Not subject to K, Ka, or Kb; see note 2
EU0071	IMI-1 6A/B	Organic Waste Hold Tank	633-207	Not subject to K, Ka, or Kb; see note 2
EU0073	IMI-1 11	Multipurpose Tank; 7,800 gallon capacity; Installed 1986	110-034	Not subject to K, Ka, or Kb; see note 2
EU0074	IMI-1 13	Aqueous Premix Tank; 25,000 gallon capacity; installed 1986	200-034	Not subject to K, Ka, or Kb; see note 2
EU0075	IMI-1 14	Final Product Storage Tank; 25,000 gallon capacity;installed 1986	200-011	Not subject to K, Ka, or Kb; see note 2
EU0076	IMI-1 15	Drain Tank	633-203	Not subject to K, Ka, or Kb; see note 2
EU0077	IMI-1 16	Drain Hold Tank	633-225	Not subject to K, Ka, or Kb; see note 2
EU0079	IMI-1 18 and IMI-1 6A/B	Solvent Storage Tank; 8,000 gallon capacity; Installed 1986	110-031	Not subject to K, Ka, or Kb; see note 2
EU0080	IMI-1 19	Multipurpose Tank; 7,000 gallon capacity Installed 1986	110-014X	Not subject to K, Ka, or Kb; see note 2

Note 1: The tank does not satisfy the size requirements in the applicability section of the rule.
Note 2: These tanks are subject to 40 CFR Part 63 Subpart MMM, and as such are required to comply only with the provisions of that MACT. [see 63.1360(i)(3)]

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63 Subpart MMM-National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

IMI-1 Manufacturing Facility:

This facility produces the active ingredients for several herbicide products in the imidazolinone family: ARSENAL, CADRE, PURSUIT, RAPTOR, and SCEPTER. The chemical route is essentially the same. The initial raw material is different for each product. All subject units meet the definition of existing. The applicability of this regulation is detailed in the table below:

Table 10: Applicability of 40 CFR Part 63Subpart MMM to IMI1 production plant

EU#	Point #	Unit Description	Process #	Explanation
EU0060	IMI-1 1	Toluene Storage Tank; 12,700 gallon capacity; Installed 1986	110-005	No applicable requirements, see Note 3
EU0060a	IMI-1 2	MIBK Storage Tank; 8,000 gallon capacity; Installed 1986	110-025	No applicable requirements, see Note 3
w/o	IMI-1 3	XXXX Storage Tank; 12,700 gallon capacity; Installed 1986	110-001	Not subject to MMM-see Note 1
w/o	IMI-1 4	Sulfuric Acid Storage Tank; 12,700 gallon capacity; Installed 1986	110-025	Not subject to MMM-see Note 1
EU0081	IMI-1 5	Diacid Hopper	120-017	Not subject to MMM-see Note 2
EU0061	IMI-1 6A/B	XXXX Storage Tank; 30,000 gallon capacity; installed 1986	110-008	Subject to MMM as a Group 1 storage vessel
EU0062	IMI-1 6A/B	Process Section 120		Subject to MMM as a process vent
EU0063	IMI-1 6A/B	Process Section 130		Subject to MMM as a process vent
EU0064	IMI-1 6A/B	Process Section 140/150		Subject to MMM as a process vent
EU0065	IMI-1 6A/B	Process Section 160		Subject to MMM as a process vent
EU0066	IMI-1 6A/B	Process Section 170		Subject to MMM as a process vent
EU0067	IMI-1 6A/B	Solvent Recovery Section 180		Subject to MMM as a process vent
EU0068	IMI-1 6A/B	Formulation Vessel	200-001	Subject to MMM as a process vent
EU0069	IMI-1 6A/B	Formulation Vessel	200-037	Subject to MMM as a process vent
EU0070	IMI-1 6A/B	Aqueous Waste Hold Tank	633-205	Subject to MMM as a wastewater tank
EU0071	IMI-1 6A/B	Organic Waste Hold Tank	633-207	Subject to MMM as a wastewater tank
EU0072	IMI1-1 6B	IMI1 Facility Fumes bypass		Subject to MMM as a process vent
EU0082	IMI-1 7	Process Section 190		Not subject to MMM-see Note 2
EU0083	IMI-1 9	Packaging Operations Section 190		Not subject to MMM-see Note 2
EU0084	IMI-1 10	Supersack Charging		Not subject to MMM-see Note 2
EU0085	IMI-1 10	Solids Charging Conveyor	200-054	Not subject to MMM-see Note 2
EU0073	IMI-1 11	Multipurpose Tank; 7,800 gallon capacity; Installed 1986	110-034	No applicable requirements, see Note 3
EU0086	IMI-1 12	Urea Charging Hopper	200-006	Not subject to MMM-see Note 2
EU0074	IMI-1 13	Aqueous Premix Tank; 25,000 gallon capacity; installed 1986	200-034	No applicable requirements, see Note 3
EU0075	IMI-1 14	Final Product Storage Tank; 25,000 gallon capacity;installed 1986	200-011	No applicable requirements, see Note 3
EU0076	IMI-1 15	Drain Tank	633-203	Subject to MMM as a wastewater tank
EU0077	IMI-1 16	Drain Hold Tank	633-225	Subject to MMM as a wastewater tank
EU0078	IMI-1 17	Building Vent (fugitives)		Subject to MMM as equipment leaks
EU0079	IMI-1 18 and IMI-1 6A/B	Solvent Storage Tank; 8,000 gallon capacity; Installed 1986	110-031	No applicable requirements, see Note 3
EU0080	IMI-1 19	Multipurpose Tank; 7,000 gallon capacity Installed 1986	110-014X	No applicable requirements, see Note 3

Note 1: 63.1360(d)(5)(vii) states that vessels storing material that contains no organic HAP or contains organic HAP as impurities only are exempt from MMM.

Note 2: The dry material unloading stations and finished packaging section are not subject to MMM because these processes do not emit HAPs. Although they do meet the definition of bag dumps and product dryers, the emission standards apply to those units that perform the following:

1. Product dryers that dry a PAI or integral intermediate that is a HAP;
2. Bag dumps that introduce to a PAI process unit a feedstock that is a solid material and a HAP; or
3. Gaseous HAP emissions from product dryers or bag dumps.

These units do not perform any of these operations, therefore they have no applicable standard and are not subject to MMM.

Note 3: The MACT contains two categories of storage vessels: Group 1 and Group 2. Although these tanks are subject to the MACT, they have no applicable requirements.

Process Vent streams: Process emissions are treated using condensers and seal tanks, in many cases, to conserve solvents prior to entering a scrubbing system. The acid scrubber removes basic vapors (i.e. ammonia). The caustic scrubber's primary purpose is to remove the inorganic HAP, XXXXX. The HAPs and fumes unaffected by this treatment process are combined and conveyed to at least one of the three hazardous waste incinerators in the North Waste Management Area. The combination of process vents is designated as a large, Group 1 process vent.

The caustic scrubber was installed to control XXXXX, which is generated by one of the reactions and which is a personnel safety concern. It is not the primary control device. The fumes from the caustic scrubber are treated in one the 3 incinerators in the North Waste Management area. The only time fumes go to atmosphere after passing through the caustic scrubber is during an SSM event involving the fume system. Therefore, the requirements pertaining to scrubber design, operation, and maintenance have not been included to demonstrate compliance with this MACT.

Storage Tanks: The XXXXX storage tank (process #110-008) meets the Group 1 storage vessel definition and is part of this PAI process unit. This vessel contains a toluene solution of a raw material. This vessel is a pressure-rated storage tank. It is maintained under a slightly positive pressure and vents (as required) via a closed-vent system to the acid/caustic scrubbing system. Any toluene vapors unaffected by this process are conveyed via the common vent system to at least one of the three hazardous waste incinerators where they are destroyed. This storage vessel requires a fixed roof design, a closed-vent system, and a control device that reduces HAP by at least 95% by weight.

Wastewater Tanks: There are four wastewater tanks in the IMI-1 facility, as detailed in the table below. They are used to manage Group1 wastewater streams and residuals.

Table 11:Emissions path for wastewater tanks in IMI-1 production plant

EU#	EP#	Unit Description	Process #	Vapor Emissions	Wastewater Path
EU0070	IMI-1 6 A/B	Aqueous Waste Hold Tank	633-205	Closed vents which are vented to a seal pot, then to the caustic scrubber, and then to an incinerator	Pumped to 633-003A/B at South incineration or 633-003 at North incineration
EU0071	IMI-1 6 A/B	Organic Waste Hold Tank	633-207		Pumped to 633-003 A/B at South incineration or 633-421 at North incineration
EU0076	IMI-1 15	Drain Tank	633-203	Vented to atmosphere	Pumped to 633-225
EU0077	IMI-1 16	Drain Hold Tank	633-225	Vented to atmosphere	Pumped to 631-201 aqeous water header or 633-003 A/B at South incineration

Each tank shown above is a fixed roof tank equipped with a closed vent system. The drain tank (process #633-203) and the drain hold tank (process #633-225) are used to collect floor washings (water) and may contain incidental quantities of contaminants. The other two vessels discharge fumes/vapors to the acid/caustic scrubber system (via vent condensers) and then to the incinerators because the emissions contain organic HAPs. All four wastewater tanks, considering their size, design, and use, comply with 40 CFR §63.133(a)(1).

Other Regulatory Determinations

Proposed Permit Conditions

Request to increase emissions:

Under Permit No. 0694-008, no additional emissions allowance was provided for emissions increases related to the expansion of the IMI-1 Plant. In the operating permit application, BASF Corporation - Hannibal Plant requested that the operating conditions for the IMI-1 Plant be revised to reflect compliance with the regulation for obtaining deminimis permits, which is to maintain any increase in emissions below 40 tons per year in VOC emissions above the originally permitted VOC emissions for this facility under Permit to Construct No. 0885-005A. In its' operating permit application, BASF Corporation - Hannibal Plant committed to complying with the deminimis permit regulations for the IMI-1 Plant expansion permit (Permit No. 0694-008) by maintaining increases in emissions from the plant modifications below 40 tons per year VOC emissions above the originally permitted VOC emission levels included in Permit No. 0885-005A. To demonstrate compliance with this commitment, BASF Corporation - Hannibal Plant proposed to control emissions from the IMI-1 Plant in the same manner as was provided in Permit No. 0694-008. At the projected emission rates for direct emissions included in the construction permit application for Permit No. 0694-008, the compliance conditions for this operating permit would restrict the IMI-1 Plant to utilizing the caustic scrubber as the only means of emission control for a maximum of 3,140 hours per year. This would limit the potential VOC emissions increase associated with the IMI-1 Plant modification to 39.5 tons per year above the originally permitted emission levels. BASF Corporation - Hannibal Plant proposed to demonstrate compliance with the VOC emission levels included in the operating permit application based on process information, engineering calculation, and monitoring requirements included in Permit No. 0694-008. BASF Corporation - Hannibal Plant would continue to voluntarily operate its emissions control systems to provide maximum emission reductions from the IMI-1 Plant. The proposed operating permit conditions were requested to provide for applicable regulatory requirements associated with this plant.

The previous paragraph details the proposal made by the applicant to increase the allowable emissions from the IMI-1 Plant by 40 tons per year of VOC emissions. The type of permit modification that is requested cannot be granted through either the operating permit program or the New Source Review (NSR) program.

Voluntary vs. required control devices:

Under permit 0885-005A, the particulate emissions from the final product drying section (Process Section 190) were permitted to be ducted to a baghouse (process #631-025), followed by a direct contact condenser (process #190-005). The particulate emissions from the final product charging section, a part of the Packaging Operation Section 190, are also ducted through a baghouse (process #190-019X), followed by a HEPA filter (process #190-003X). In its operating permit application, the installation proposed to eliminate the HEPA filters process #'s 631-024X (IMI1-05), 631-027 (IMI1-08), 190-003X (IMI1-09), and 631-312 (IMI1-10) from consideration as permitted control devices, and stated that the plant would continue operating these condensers on a voluntary basis. All of these HEPA filters were considered in the compliance demonstrations for Construction Permit 102009-007, therefore, these units are required and are no longer considered voluntary.

In its operating permit application, the installation proposed to eliminate the vent condensers associated with emission units IMI1-01, IMI1-02 and IMI1-03 from consideration as permitted control devices, and stated that the plant would continue operating these condensers on a voluntary basis. While the vent

condensers are not required for compliance with emissions standards, these emissions systems were a part of the original permit applications, and were relied upon in the review of the proposed equipment. The permittee shall not remove or discontinue the use of the control devices once operation of the control devices has begun. To do so would be considered a "modification" under the state rules, and would require that the permittee obtain a construction permit prior to the discontinuance.

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*

1. Process Descriptions
   A) Emission Point IMI-5 (EU0081)- Baghouse (631-018).
   Emissions from this source are generated from the loading of dry materials for the IMI-1 processes, which consists of drum and IBC charging. There is a required HEPA filter installed downstream of the baghouse. The removal efficiency of the HEPA filter has not been included in the compliance demonstration, therefore its' operation is voluntary.
   B) Emission Point IMI-7 (EU0082)- Baghouse (190-002X) followed by Direct contact condenser (190-005X)
   Emissions from this source are generated from the of drying of product Operation of the baghouse and the direct contact condenser is required at all times by construction permit 102009-007.
   C) Emission Point IMI-9-(EU0083) Packaging baghouse (190-019X)
   Emissions from this source are generated from product packaging operations for IMI-1 production. This operation is also controlled by a required HEPA filter. See section "*Voluntary vs. required control devices*"" above.
   D) Emission Point IMI-10 (EU0084)- Baghouse (631-310)
   Emissions from this source are generated from the IBC charging station. There is a required HEPA filter installed downstream of the baghouse.
   E) Emission Point IMI-12 (EU0086)-Bag filter (631-022X)
   Emissions from this source are generated from the charging of soda ash for decontamination of the IMI-1 formulation equipment. Operation of the baghouse is required by construction permit 102009-007.
2. Exemptions: 10 CSR 10-6.400(1)(B)11. exempts emission units that have potential emissions of less than 0.5 lbs PM/hr. All of the particulate matter emission units in the IMI-1 plant meet this exemption, as shown in the table below:

Table 12: Applicability Determination of 10 CSR 10-6.400 to IMI-1 Production Plant

EU No.	EP No.	Equipment Description	PM PTE (lb/hr)	Maximum Hourly Design Rate (ton/hr)
EU0081	IMI-1 5	Raw Materials Handling System: Diacid Hopper	0.03	3.00
EU0082	IMI-1 7	Process Section 190: Dryer	0.01	0.44
EU0083	IMI-1 9	Packaging Operations Section 190	0.002	0.39
EU0084 & EU0085	IMI-1 10	Raw Materials Handling System: Dry Material Unloading in Formualtions	0.01	0.12
EU0086	IMI-1 12	Raw Materials Handling System: Urea (now Soda Ash) Charging Hopper	0.002	2.75

Note 1: The product with the lowest MHDR was used to calculate the emission limit. The PM PTE includes the required control devices.

IMI-2 Plant

Plant Overview

The IMI-2 Plant was originally constructed under Construction permit #0887-003. At the time that this plant was originally permitted, there were no New Source Performance Standards (NSPS) applicable to the construction. Construction permit #0696-013 was issued to allow for modifications to the IMI-2 plant that included process vessels, pumps, piping, and related appurtenances. Construction permit #082005-014 allows the production of three new pesticide active ingredient intermediates for imidazolinone herbicides. Construction Permit #102008-001 allows for production of 800H herbicide and expanded production of diacids.

The IMI-2 plant is an herbicide manufacturing facility that includes raw material handling, material storage, and the herbicide production facilities. Process Sections 120, 130, 150, 160, 170, 180, 190, and 210 of the IMI-2 Plant are all interrelated process steps for the manufacture of a variety of herbicide products under the product family known as imidazolinones. These process steps include addition of various organic raw materials together with inorganic and acid/caustic materials. The process steps include various heating/cooling cycles, mixing, precipitation, phase separation, etc.

Process Section 120 has a separate sodium methoxide ($NaOCH_3$) scrubbing system (process #631-060X) for a dry raw material handling system. Process Section 170 vents directly to a process vent condenser followed by the dimethyl ether (DME) combustor (process #631-026) for control of VOC emissions. The remaining process steps vent through a common fume handling system that is operated under vacuum. The fume handling system consists of a combination of vent condensers, seal pots, and finally a caustic scrubbing system for emission controls. Emissions from the IMI-2 Plant are directed to the caustic scrubber (process #631-205) and further treated at the North Waste Management Area incinerators.

Process Section 200 consists of a wet product centrifuge for final product separation prior to product drying and the drying system for final product drying. This system is controlled by the packaging baghouse (process #631-068) followed by a HEPA filter (process #631-XXX), as well as a product scrubber (process #631-070). The dried product is packaged typically in large volume supersacks; however it can also be packaged in fiber drums.

The IMI-2 seal pot is a liquid sealing system for the process vents from the IMI-2 Plant separating the process vessels from the rest of the fume handling system. The IMI-2 Waste Storage Section 630 consists of transfer vessels for delivering wastes from the IMI-2 Plant to the storage tanks in the North and South Waste Management Area incinerators for destruction.

Six storage tanks are at the IMI-2 plant. The organics stored in these tanks include toluene, dimethyl sulfoxide (DMSO), methylene chloride, and methanol. The emissions from the toluene, DMSO, methylene chloride, and methanol storage tanks are controlled by vent condensers. No control is provided for the aqueous or anhydrous ammonia storage tanks. These tanks have multiple duty for Diacids. This is detailed in the Diacid construction permit.

Storage tanks containing raw materials for the IMI2 process are also located in the IMI-1 and THIMET/COUNTER facilities. These tanks are used for storage of XXXXX, sulfuric acid, and caustic soda . These tanks are discussed further in their respective production plant sections.

A flare for the control and destruction of the dimethyl ether emissions is fired by the DME vent gas (11,400 BTU/lb) and natural gas (1000 BTU/ft^3) at a rate of 0.10 MMBTU per hour. The process wastes, such as wastewater, are managed on-site in the North and South Waste Management Area incinerators.

The DME combustor (flare) was only used for ASSERT manufacture. It is out of service as of the end of 2008 and not used for other products. No more ASSERT will be produced in IMI-2

Construction Permit History:
All air permitting actions are discussed below in chronological order. The description is presented as it was at the time of permitting. Any changes to the regulatory determinations made in these permits are addressed elsewhere in this document

1. Construction Permit 0887-003
   This permit was issued July 27, 1987, to authorize manufacture of the herbicide ASSERT®. This herbicide is in the imidazolinone family of products. The new source will consist of raw material handling, material storage, and the herbicide production facilities. The compounds emitted by this operation will include ASSERT®, ammonium chloride (NH_4Cl), 4-methyl phthalic anhydride (4-MPA), ammonia (NH_3), XXXXX (XXXXX), dimethyl ether (DME), toluene, methanol, dimethyl sulfoxide (DMSO), methyl isopropyl ketone (MIPK), methylene chloride ($MeCl_2$), and XXXXX. The emissions of NH_3, XXXXX, DME, toluene, methanol, DMSO, MIPK, $MeCl_2$, and XXXXX are controlled by a fume system caustic scrubber, the emissions of 4-MPA are controlled by a HEPA filter, the emissions of NH_4Cl are controlled by a baghouse, and the emissions of herbicide product are controlled by a HEPA filter. The emissions from the DME combustor (flare) will include toluene, monomethyl sulfate ($MEHSO_3$), $MeCl_2$, water, methanol, DME, hydrochloric acid (HCl), chlorine (Cl_2), particulate matter, nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon dioxide (CO_2), and carbon monoxide (CO). The utilities services to this manufacturing facility will be provided from existing plant facilities. The only exception is the addition of a flare for the control of the dimethyl ether emissions; this flare will be fired by the DME vent gas (11,400 Btu/hr) and natural gas, at a rate of 0.10 MMBtu/hr. The approximate firing rate will be 95 lbs/day. The normal waste (ie paper waste) from this facility will be transported off site to an approved installation. The process wastes, such as wastewater, will be managed on-site in the existing incineration waste treatment facilities constructed for the PROWL® and THIMET®/COUNTER® manufacturing facilities under construction permit 0276-003. Seven storage tanks will be installed for these new operations, none larger than 40,000 gallon capacity, 5 are less than 15,000 gallon capacity. The organics stored in these tanks include toluene, dimethyl sulfoxide (DMSO), methyl isopropyl ketone (MIPK), methylene chloride, and methanol. Existing storage tanks in the ARSENEL®/SCEPTER® and THIMET®/COUNTER® facilities will be used for storage of XXXXX, sulfuric acid, and caustic soda.
   The emissions from the toluene, DMSO, methylene chloride, methanol, and sulfuric acid storage tanks will be controlled by vent condensers. The emissions from the XXXXX tank go through the scrubbers, to the seal pot and to one of 3 incinerators in the North Waste Management area. No control is provided for the caustic soda storage tank, the aqueous ammonia storage tank, nor the dimethyl sulfoxide storage tank. The emissions from the production of ASSERT® are vented through process vent condensers, then through an acid scrubber to remove ammonia (99.9% efficient), followed by a caustic scrubber to remove XXXXX (99.9% efficient). Emissions of

ASSERT® from the packaging area are vented through a baghouse (99% efficient) followed by a HEPA filter (99.9% control), for an effective control rate of 99.999%. The emissions of 4-methyl phthalic anhydride (4-MPA) are controlled through a baghouse followed by a HEPA filter, for an effective control rate of 99.9997%. The HEPA filters installed under this Construction Permit were considered in the emissions review, and are therefore considered required control equipment.
There are no NSPS or PSD requirements that are applied in this permit. This construction permit does not contain any special conditions. These operations are currently known as IMI-2 Plant.

2. Construction Permit 0696-013
This permit was issued June 14, 1996 to authorize modification of the IMI-2 production facility, including process vessels, pumps, piping, and related appurtenances. This permit does not contain any federal regulations nor any special conditions.
3. Construction Permit 082005-014
This permit was issued August 22, 2005 to authorize modifications to the IMI-2 manufacturing facility to allow production of three new pesticide active ingredient intermediates for imidazolinone herbicides. This project will allow the production of two dicarboxylic acids, XXXX. In addition, production of a XXXX will occur. All three materials are pesticide active ingredients for BASF's imidazolinone herbicides that are presently produced. Production will occur using existing and new equipment in the IMI-2 Department. Each diacid intermediate will be produced on a campaign basis utilizing the IMI-2 Department for a portion of the year. The IMI-2 plant will continue to produce presently permitted imidazolinone herbicides in the Department for the remainder of the year.
The XXXX intermediates are solids. The dicarboxylic acids are subsequently used in the production of imidazonlinone herbicides in the IMI-1/2 Departments. The dicarboxylic acid dimethyl ester is used in the production of a particular dicarboxylic acid, referred to as XXXXX, in the Pyrrole Department; the XXXXX is subsequently used for production of another imidazolinone herbicide in the IMI-1 Department. Production of these intermediates is a ten or eleven step batch process depending on the product.
Existing emissions control devices will control emissions from these modifications. Organic HAP emissions from process vents will be handled in the IMI-2 Department's fume system, and subsequently incinerated in one of the three hazardous waste incinerators in the North Waste Management Area. Liquid process waste will be handled in the existing waste storage tanks and incinerators in the North and South Waste Management Areas.
The following production equipment will be used for this project: Emission point IMI-2 1 will account for the emissions from the toluene storage tank (process #110-029). This tank is controlled by a chilled water vent condenser. Emission point IMI- 2 3 consists of the methanol/tetrahydrofuran storage tank (process #110-039). This tank is also equipped with a chilled water vent condenser. Emission point IMI-2 4 will account for the glacial acetic acid/dimethyl sulfoxide storage tank (process #110-007). Emission point IMI-2 7 consists of an existing $NaOCH_3$ scrubber (process #631-060X). Emission point IMI-2 10 accounts for the particulate matter emissions from the packaging of the dried product. These emissions are controlled by a baghouse (process #631-068). A HEPA filter is downstream of this baghouse to further control emissions. Emission point IMI-2 13 accounts for the fugitive emissions from potential pump seal failure and sample points. Emission point PR-47 consolidates the existing three hazardous waste incinerators in the North Waste Management Area. Emissions may be vented from any one of the three stacks: A, B, or C, depending on where the flume flow is directed. The emissions will be the same from any of the stacks.

The HEPA filters and vent condensers installed under this Construction Permit were considered in the emissions review, and are therefore considered required control equipment.
This permit applies 40 CFR Part 63 Subpart MMM- National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production, and contains two special conditions, which were superceded by construction permit 102008-001.

4. Construction Permit 1020008-001
   This permit was issued to authorize production of 800H herbicide and expanded production of three diacids which will be used in other imidazolinone production. All three diacids are pesticide active ingredient intermediates for the installation's imidazolinone herbicides that are presently produced. This permit contains special conditions which appear as permit conditions.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

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.

Table 13: Applicability of 40 CFR Part 60 Subparts K, Ka, and Kb to the IMI-2 production plant

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
w/o	no EP-no vent to atmosphere	Aqueous Ammonia Storage Tank (process #110-023X)	Not subject to K, Ka, or Kb; see note 1
w/o	no EP-no vent to atmosphere	Anhydrous Ammonia Storage Tank (process #110-044X)	Not subject to K, Ka, or Kb; see note 1
EU0087	IMI-2 1	Toluene Storage Tank (process# 110-029); 13,500 gallon capacity; Installed 1988, controlled by Chilled Water Condenser (process #631-001)	Not subject to K, Ka, or Kb; see note 2
w/o	IMI-2 2	Dichloromethane Storage Tank (process #110-014); 6,500 gallon capacity; Installed 1988; controlled by Chilled Water Condenser (process #631-004)	Not subject to K, Ka, or Kb; see note 1
EU0088	IMI-2 3	Methanol/Tetrahydrofuran Storage Tank (process #110-039); 13,500 gallon capacity; Installed 1988; controlled by ; Chilled Water Condenser (process #631-005)	Not subject to K, Ka, or Kb; see note 1 when containing methanol, note 2 when containing THF
w/o	IMI-2 4	Dimethyl Sulfoxide/Acetic Acid Storage Tank (process #110-007); 13,500 gallon capacity; Installed 1988	Not subject to K, Ka, or Kb; see note 1
EU0091	IMI-2 8A/B	IMI2 Waste Storage Section 630; Aqueous Waste Hold Tank (process # 633-010); controlled by seal pot followed by Caustic Scrubber (process #631-205); followed by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 2
EU0092	IMI-2 8A/B	IMI2 Waste Storage Section 630; Organic Waste Hold Tank (process #633-016); controlled by seal pot followed by Caustic Scrubber (process #631-205), followed by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 2
EU0099	IMI-2 8A/B	Mother Liquor Storage Tank (process #190-005)	Not subject to K, Ka, or Kb; see note 2
EU0105	IMI-2 11	Drain Hold Tank (process #633-013)	Not subject to K, Ka, or Kb; see note 2
EU0106	IMI-2 12	Drumming Area Hold Tank (process #633-019)	Not subject to K, Ka, or Kb; see note 2

Note 1: The tank does not satisfy the size requirements in the applicability section of the rule.
Note 2: These tanks are subject to 40 CFR Part 63 Subpart MMM, and as such are required to comply only with the provisions of that MACT. [see 63.1360(i)(3)]

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63 Subpart MMM-National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

IMI2 Manufacturing Facility

This facility produce the active ingredients for one herbicide product (KIXOR). This process involves several chemical reactions (condensation, hydrolysis, cyclization, and esterfication) as well a precipitation, stripping, distillation, and centrifugation. The starting raw material and the chemical process differs for each product. All subject units meet the definition of existing. The applicability of this regulation is detailed in the table below:

Table 14: Applicability of 40 CFR Part 63 Subpart MMM to the IMI-2 production plant

EU#	Point #	Unit Description	Process #	Explanation
w/o	no EP-no vent to atmosphere	Aqueous Ammonia Storage Tank	110-023X	Not subject to MMM-see Note 1
w/o	no EP-no vent to atmosphere	Anhydrous Ammonia Storage Tank	110-044X	Not subject to MMM-see Note 1
EU0087	IMI-2 1	Toluene Storage Tank; 13,500 gallon capacity; Installed 1988	110-029	No applicable requirements, see Note 3
w/o	IMI-2 2	Dichloromethane Storage Tan; 6,500 gallon capacity; Installed 1988	110-014	Not subject to MMM-see Note 1
EU0088	IMI-2 3	Methanol/Tetrahydrofuran Storage Tank; 13,500 gallon capacity; Installed 1988	110-039	No applicable requirements, see Note 4
w/o	IMI-2 4	Dimethyl Sulfoxide/Acetic Acid Storage Tank; 13,500 gallon capacity; Installed 1988	110-007	Not subject to MMM-see Note 1
EU0089	IMI-2 7	Process Section 120: Diacid Handling		Not subject to MMM-see Note 2
EU0090	IMI-2 8A/B	Process Section 120: Sodium Methoxide Handling		Subject to MMM as a process vent
EU0091	IMI-2 8A/B	IMI2 Waste Storage Section 630; Aqueous Waste Hold Tank	633-010	Subject to MMM as a wastewater tank
EU0092	IMI-2 8A/B	IMI2 Waste Storage Section 630; Organic Waste Hold Tank	633-016	Subject to MMM as a wastewater tank
EU0093	IMI-2 8A/B	IMI2 Process Section 160		Subject to MMM as a process vent
EU0094	IMI-2 8A/B	IMI2 Process Section 130		Subject to MMM as a process vent
EU0095	IMI-2 8A/B	IMI2 Process Section 150		Subject to MMM as a process vent
EU0096	IMI-2 8A/B	IMI2 Process Section 180		Subject to MMM as a process vent
EU0097	IMI-2 8A/B	IMI2 Process Section 210		Subject to MMM as a process vent
EU0098	IMI-2 8A/B	IMI2 Process Section 190		Subject to MMM as a process vent
EU0099	IMI-2 8A/B	Mother Liquor Storage Tank	190-005	Subject to MMM as a Group 1 storage vessel
EU0100	IMI-2 8A/B	Process Section 200; Wet Product Centrifuge		Subject to MMM as a process vent
EU0101	IMI-2 10	Process Section 200; Product drying/packaging system		Not subject to MMM-see Note 2
EU0102	IMI-2 8B	IMI2 Facility Fumes bypass for HazWaste incinerators from Caustic Scrubber	631-205	Subject to MMM as a process vent
EU0103	IMI-2 9/9A	IMI2 Process Section 170		Subject to MMM as a process vent
EU0104	IMI-2 9A	Emergency Bypass for Flare	631-026X	Subject to MMM as a process vent
EU0105	IMI-2 11	Drain Hold Tank	633-013	Subject to MMM as a wastewater tank
EU0106	IMI-2 12	Drumming Area Hold Tank	633-019	Subject to MMM as a wastewater tank
EU0107	IMI-2 13	Building vent (fugitives)		Subject to MMM as equipment leaks

Note 1: 63.1360(d)(5)(vii) states that vessels storing material that contains no organic HAP or contains organic HAP as impurities only are exempt from MMM.

Note 2: The dry material unloading stations and finished packaging section are not subject to MMM because these processes do not emit HAPs. Although they do meet the definition of bag dumps and product dryers, the emission standards apply to those units that perform the following:

1. Product dryers that dry a PAI or integral intermediate that is a HAP;
2. Bag dumps that introduce to a PAI process unit a feedstock that is a solid material and a HAP; or
3. Gaseous HAP emissions from product dryers or bag dumps.

These units do not perform any of these operations, therefore they have no applicable standard and are not subject to MMM.

Note 3: The MACT contains two categories of storage vessels: Group 1 and Group 2. Although these tanks are subject to the MACT, they have no applicable requirements.
Note 4: For EU0088- this tank is exempt per 63.1360(d)(5)(vii) when containing THF; it is classified as s Group 2 vessel when containing methanol.

Process Vent Streams:
For Process Sections 120, 13, 150, 160, 180, 190, and 210, process emissions are treated using condensers, in many cases to conserve solvents, and seal tanks prior to entering the scrubbing system. The caustic scrubbers primary purpose is to remove XXXXX. These fumes are then sent to the RCRA incinerators in the North Waste Management System. Process Section 170 consists of an esterification process in which a mixture of methanol, dichloromethane, and dimethyl ester is evaporated. This vapor stream is directed to a condenser to recover the methanol. The stream is then directed to a flare called the DME combustor. For this MACT, these process vents are designated as "Group 1 process vents"

The caustic scrubber was installed to control XXXXX, which is generated by one of the reactions and which is a personnel safety concern. It is not the primary control device. The fumes from the caustic scrubber are treated in one the 3 incinerators in the North Waste Management area. The only time fumes go to atmosphere after passing through the caustic scrubber is during an SSM event involving the fume system. Therefore, the requirements pertaining to scrubber design, operation, and maintenance have not been included to demonstrate compliance with this MACT.

Storage Vessels:
The mother liquor tank (process #190-005) meets the "Group 1" storage vessel definition as is part of this PAI process unit. This vessel contains methanol in combination with other materials. The tank emissions are vented to a seal tank prior to entering the scrubbing system. . Any vapors unaffected by this process are conveyed via the common vent system to at least one of the three hazardous waste incinerators where they are destroyed. This storage vessel requires a fixed roof design, a closed-vent system, and a control device that reduces HAP by at least 95% by weight.

Wastewater Tanks
There are four wastewater tanks in the IMI-2 facility, as detailed in the table below. They are used to manage Group1 wastewater streams and residuals.

Table 15:Emissions path for wastewater tanks in IMI-2 production plant

EU#	Point #	Unit Description	Process #	Vapor Emissions	Waste Water
EU0091	IMI-2 8A/B	Aqueous Waste Hold Tank, 10,500 gallon capacity	633-010	Closed vents which are vented to a seal pot, then to the caustic scrubber, and then to an incinerator	Pumped to 633-003 A/B at South incineration or 633-003 at North incineration
EU0092	IMI-2 8A/B	Organic Waste Hold Tank, 2,050 gallon capacity	633-016		Pumped to 633-003 A/B at South incineration or 633-421 at North Incineration
EU0105	IMI-2 11	Drain Hold Tank; 8,000 gallon capacity	633-013	Vented to atmosphere	Pumped to 633-003 A/B at South incineration
EU0106	IMI-2 12	Drumming Area Hold Tank; 367 gallon capacity	633-019	Vented to atmosphere	Pumped to 631-013, Drain Hold Tank at IMI-2

Each tank shown above is a fixed roof tank equipped with a closed vent system. Tanks 633-013 and 633-019 are used to collect floor washings (water) and may contain incidental quantities of contaminants. The other two vessels discharge fumes/vapors to the acid/caustic scrubber system (via

vent condensers) and then to the incinerators to control XXXXX emissions. All four wastewater tanks, considering their size, design, and use, comply with 40 CFR §63.133(a)(1).

Other Regulatory Determinations
Under Construction Permit #082005-014, the $NaOCH_3$ scrubber system 631-060X (IMI2-07) is expected to provide 87% control PM_{10} emissions and 60.5% control of VOC/HAP emissions. The Packaging Area (Process Section 200) baghouse 631-068 (IMI2-10) is expected to provide 97% control of PM_{10} emissions. In its operating permit application, the installation proposed to eliminate the HEPA filters from consideration as permitted control devices, and stated that the plant would continue operating these filters on a voluntary basis. The HEPA filters used at the IMI-2 Plant were included in the construction permit emissions evaluations. The permittee shall not remove or discontinue the use of these control devices.

In its operating permit application, the installation proposed to eliminate the vent condensers associated with emission units IMI2-01, IMI2-02 and IMI2-03 from consideration as permitted control devices, and stated that the plant would continue operating these condensers on a voluntary basis. While the vent condensers are not required for compliance with emissions standards, these emissions systems were a part of the original permit applications, and were relied upon in the review of the proposed equipment. The permittee shall not remove or discontinue the use of the control devices once operation of the control devices has begun. To do so would be considered a "modification" under the state rules, and would require that the permittee obtain a construction permit prior to the discontinuance.

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*
1. Process Descriptions
   A) Emission Point IMI-2 07 (EU0089)- Scrubber (631-060X) Emissions from this source are generated from the loading of dry materials for the IMI-2 processes, which consists of drum charging. There is a HEPA filter (631-059X) installed downstream of the scrubber. The removal efficiency of the HEPA filter has not been included in this compliance demonstration.
   B) Emission Point IMI-2 10 (EU0101)- Packaging Baghouse (631-068) followed by a HEPA filter (631-XXX) installed downstream of the baghouse. Emissions from this source are generated from the drying of product. The removal efficiency of the HEPA filter has not been included in this compliance demonstration.
2. Exemptions: 10 CSR 10-6.400(1)(B)11. exempts emission units that have potential emissions of less than 0.5 lbs PM/hr. All of the particulate matter emission units in the IMI-1 plant meet this exemption, as shown in the table below:

Table 16: Applicability of 10 CSR 10-6.400 to IMI-2 production plant

EU No.	EP No.	Equipment Description	PM PTE (lb/hr)	Maximum Hourly Design Rate (tons/hr)
EU0089	IMI-2 07	Scrubber System - Process Section 120	0.21	0.70
EU0101	IMI-2 10	Packaging Baghours - Process Section 200	0.11	0.79

Note 1: PTE comes from 2006 Diacid construction permit application (See Construction Permit #082005-014).
Note 2: MHDR for EU0089 from 1394 lb/hr on IMI-2 7 Diacid EIQ Rev. F
Note 3: MHDR for EU0090 from 6300 lb in 4 hr from 2006 Diacid construction permit application (See Construction Permit #082005-014).

PROWL® Plant and Sulfuric Acid Regeneration (SAR) Facility

Plant Overview
The PROWL® plant was originally constructed under Construction Permit #0276-003, and went through a series of modifications, as permitted in Construction Permit #s 0489-004A, 1189-001, 0690-005, 0997-003, and 062000-019. At the time that the SAR Facility and PROWL® Plant modifications were permitted, there were no NSPS applicable to the construction.

The production of the PROWL® herbicide can be considered to be the reactions, in several stages, of several different chemicals. As such, the reactions take place in closed vessels, with enclosed piping linking the vessels. The byproducts of production are either recovered in the SAR facility, recycled within the production process, or incinerated. Storage tanks typically have vent condensers to reduce emissions of raw material storage. The net result is that this production takes place in a closed system.

The SAR facility is a sulfuric acid regeneration facility that is an integral part of the PROWL® production process. Sulfuric acid used in the PROWL® process is returned to the SAR facility to be regenerated to 98% sulfuric acid for reuse in the process. The SAR facility was constructed under Construction Permit #0488-001, and was modified under permit 0997-003. The SAR Furnace was put into service in 1997, and has a maximum design rate of 75.6 MMBtu/hr. The SAR plant was originally permitted at a production rate of 70,000 tons per year (nominally 200 tons per day) of 100% sulfuric acid. Through improvements in the SAR Plant, the currently permitted production capacity is 260 tons per day of 100 % sulfuric acid for use in the PROWL® process.

The SAR plant was constructed as a replacement for the former PROWL® sulfuric acid concentration (SAC) plant, which was constructed as a part of the original PROWL® plant. The installation of the sulfuric acid recovery plant resulted in a significant reduction in aqueous waste incineration requirements associated with waste streams from the former SAC plant.

The SAR facility provides extensive on-line monitoring to demonstrate compliance with applicable permit limitations. These include instruments for sulfur dioxide (SO_2) continuous emissions monitors (CEM), product flowmeters, as well as information on normal plant operating parameters. The continuous emission monitoring equipment was approved by the MDNR as a part of the SAR Facility performance testing and will be required to provide monitoring information for this operating permit.

SAR Plant Emissions:
There are minimal particulate matter emissions from emission point PR-51. The process gases pass through a multipass catalyst system which includes several catalyst beds as well as wet scrubbing as part of the process. Because of the design of the reduction and oxidation furnaces of the SAR plant (e.g. extensive retention times, turbulence, etc.), the CO emissions from the SAR plant are estimated to be negligible.
Portions of the SO_2, NO_X, and VOC emissions are attributable to the combustion of natural gas as a part of the process. As a practical matter, these combustion emissions are not separated from the process emissions from the recovery of the sulfuric acid. The combustion components would be converted in the SAR process along with the process acid feed.

BASF uses a CEM for sulfur dioxide to monitor emissions from the SAR plant. This CEM in conjunction with acid production monitoring assures the plant operates at an emission rate of 4 lbs of

sulfur dioxide emissions per ton of sulfuric acid produced. The plant maintains continuous operation of the CEM including routine calibration.

Construction Permit History:
All air permitting actions are discussed below in chronological order. The description is presented as it was at the time of permitting. Any changes to the regulatory determinations made in these permits are addressed elsewhere in this document

1. Construction Permit 0276-003
   This permit was issued March 2, 1976, to authorize construction of manufacturing facilities for PROWL®, HERBICIDE®, THIMET® Soil and Systemic insecticide and COUNTER® Soil insecticide. This permit does not contain any special conditions.
2. Construction Permit 0878-001
   This permit was issued July 28, 1978, to authorize construction of a John Zink STF S-3 incinerator for the destruction of process fumes from the diethylketone manufacturing area in the PROWL® herbicide plant. This flare was temporarily used during the reconstruction of the main PROWL® manufacturing area. Under normal operations, these emissions would be routed to the main PROWL® incinerator, however since only portions of the plant are operational, there is insufficient waste generation to operate the main incinerator. Upon completion of the reconstruction, these emissions will again be routed to the main PROWL® incinerator. This permit is not included in the operating permit as the temporary incinerator has been removed from site.
3. Construction Permit 0488-001
   This construction permit was issued on March 18, 1988, to authorize installation of a new sulfuric acid regeneration facility. This will include material handling, storage, and production facilities. This project will provide improved recovery of the process acid from the PROWL® herbicide manufacturing facility. Additionally, this project will recover hydrogen sulfide fumes from the THIMET®/COUNTER® insecticide manufacturing process and convert them to product sulfuric acid for reuse in the PROWL® manufacturing area. Prior to this construction permit, these fumes were being incinerated in the THIMET®/COUNTER® incinerator. This new sulfuric acid regeneration facility will replace the existing PROWL® sulfuric acid concentration (SAC) plant which was constructed as part of the original PROWL® plant. The installation of this new facility will result in significant reductions in aqueous waste incineration requirements associated with waste streams from the SAC plant.
   In this new plant, the sulfur dioxide and other combustion products from the combustion of spent acid and hydrogen sulfide with undried atmospheric air are passed through gas cleaning and mist removal equipment. The gas stream is passed through a drying tower, then discharged to the sulfur trioxide converter. Nearly all of the sulfur dioxide emissions come from the exit gases. The emissions of sulfur dioxide are an inverse function of the efficiency of sulfur conversion (sulfur dioxide oxidized to sulfur trioxide). The conversion efficiency at this plant will be at least 99.7% efficient.
   This facility will produce approximately 70,000 tons of sulfuric acid annually (100% basis), using as feed materials 264,100 tons/year of process gas, 13,300 tons/year of weak spent acid from existing operations, and 49,400 tons/year of strong spent acid from existing operations. Additionally, 86 tons/year of caustic will be used for effluent neutralization. The emission factor for sulfur dioxide emissions is 4 lbs of SO_2/ton of 100% sulfuric acid produced, when the conversion efficiency of sulfur dioxide to sulfur trioxide is 99.7%.

The facility will also incorporate three sources of combustion; a 16.2 MMBtu/hr combustion air preheater, and two 71.9 MMBtu/hr combustion chambers. These processes will use either natural gas or No. 2 fuel oil.

The facility will also add four new storage tanks as part of this project. These are a 25,000 gallon capacity strong spent acid tank, and 25,000 gallon capacity weak spent acid tank, a 5,000 gallon capacity effluent hold tank, and a 50,000 gallon capacity sulfuric acid (98.5%) storage tank.

The potential emissions of the application are 228 tons/year of sulfur dioxide and 221 tons/year of nitrogen oxides. The permittee will reduce emissions in other areas of the plant to offset these new emissions, so that the net emissions increase is less than the de minimis levels in 10 CSR 10-6.060. Due to a lack of sufficiently reliable emission factors for calculating the emission rates of sulfur dioxide, sulfur acid mist, and nitrogen oxides from the operation of the proposed sulfuric acid regeneration facility, the permittee is required to conduct performance testing to quantify the magnitude of emissions of sulfur dioxide, sulfur acid mist, and nitrogen oxides. This information will then be used to ascertain the magnitude of emission offsets required so that there is not a net emissions increase above the de minimis levels put forth in 10 CSR 10-6.060. There are no NESHAP or PSD requirements that apply to this new construction.

This construction permit does contain special conditions. This new construction will be subject to NSPS Subpart H, Standards of Performance for Sulfuric Acid Plants, which is explained in greater detail in the NSPS section of this Statement of Basis. The special conditions of this permit are listed below, with explanations regarding their inclusion in this operating permit:

- Special Condition #1: this condition limits the emission rate of sulfur dioxide to not exceed 4 lbs/ton of sulfuric acid produced, with the production being expressed as 100% sulfuric acid. This condition has not been incorporated into this operating permit because it was reiterated in Construction Permit 0997-003, Special Condition #1.a.1).
- Special Condition #2: this condition limits the emission rate of acid mist, expressed as sulfuric acid, to not exceed 0.15 lbs/ton of sulfuric acid produced, the production being expressed as 100% sulfuric acid. This condition has not been incorporated into this operating permit because it was reiterated in Construction Permit 0997-003, Special Condition #1.a.1).
- Special Condition #3: this condition requires performance testing be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup. This condition has not been incorporated into this operating permit as it is a one time requirement and has been satisfied.
- Special Condition #4: this condition requires the installation of a continuous monitoring system for the measurement of sulfur dioxide emissions be installed in accordance with the requirements found in 60.84 of NSPS Subpart H. This condition has not been incorporated into this operating permit as it was modified in Construction Permit 062000-019, Special Condition #6.
- Special Condition #5: this condition requires the installation to cease the incineration of hydrogen sulfide fumes in the THIMET®/COUNTER® incinerator. Because of the amount of steam generated by the sulfuric acid recovery plant's heat recovery boiler, the installation has been able to achieve sulfur dioxide emission reductions from the plant's on-site steam generating boilers that are more than equivalent to the 53 ton per year commitment associated with not burning the hydrogen sulfide fumes in the "D" incinerator (TC-01), as explained in the plant description above.
- Special Condition #6: this condition requires the permittee to accurately identify the amount of offsets required from the PROWL® utilities fuel oil boilers. This condition has not been incorporated into this operating permit, as it is a one time requirement and has been satisfied.

- Special Condition #7: this condition requires the permittee to accurately identify the amount of offsets required from the Chemico Nitric Acid Plant. This condition has not been incorporated into this operating permit, as it is a one time requirement and has been satisfied.
- Special Condition #8: this condition requires the permittee to have pre-test meetings with the MDNR-APCP. This condition has not been incorporated into this operating permit, as it is a one time requirement and has been satisfied.

The new operation area identified in this construction permit project is currently known as the SAR facility.

4. Construction Permit 0690-005
   This construction permit was issued June 12, 1990 to authorize a modification of existing equipment and construction of additional equipment to increase production capacity of the PROWL® production facility. This expansion will involve the following items:
   A. Existing nitric acid storage tanks, which formerly were used for the Chemico and Weatherly nitric acid manufacturing plants, will be maintained in service for storage of nitric acid for the PROWL® plant.
   B. A second, parallel xylene nitration/distillation train will be added to provide the required capacity for the increased PROWL® production rates. This will involve the addition of a large chiller in the production area, together with associated piping and electrical work.
   C. A new filter feed tank will be added in the reductive alkylation area of the PROWL® plant.
   D. The spent acid from the PROWL® production process will be managed in the existing sulfuric acid regeneration (SAR) plant.
   E. Process fumes and process wastes will be managed in the existing permitted waste storage tanks and waste incinerators, which provide waste management support to the PROWL® plant.

   This permit does not contain any special conditions, nor does it apply any federal regulations.
5. Construction Permit 0997-003
   This permit was issued August 29, 1997, to authorize modification of the PROWL® production facility including process vessels, piping, and related appurtenances. The proposed project will modify systems in the PROWL® production process that are currently limiting production capacity and utilize the existing capacity of the majority of the equipment present in the existing PROWL® plant. The primary modifications will be able to increase the production capacity of the reductive alkylation process (Section 150), the neutralization process (Section 170), and the SAR plant. The modifications are detailed below by section.
   Modifications to Section 150 of the process will include conversion of an existing hold tank to a reactor, the addition of a new aqueous/organic separator, addition of a new intermediate fixed roof storage tank (120,000 gallon capacity), and the installation of an additional catalyst handling system for the new reactor train for this process. The emissions from the new Section 150 process equipment will be directed through the existing emission points for the present Section 150 equipment. These include emission points PR-20, PR-21, PR-22, and PR-26. The new storage tank has a new emission point, PR-90. The tank emissions are from storage of alkyl xylidine, which is an organic intermediate manufactured in the PROWL® production process.
   Modifications to Section 170 include the addition of two new neutralizers and associated equipment to duplicate the existing neutralizers. A third evaporator and associated equipment will be added to the existing two evaporators. Emissions from this area will be directed through existing fume control systems to the plants' existing incinerators.
   Modifications to the SAR plant include enlarging the existing combustion chamber to provide additional residence time. A new compressor will be installed to be used as the primary compressor

with the existing compressor becoming a spare unit. The reverse jet scrubber will be modified to handle the increased rate from the process. The purpose of the modifications is to increase the throughput of the SAR plant to support increased PROWL® production capacity. Overall, the system improvements will increase the production capacity of the SAR plant from 200 tons/day permitted capacity to a nominal design capacity of 225 tons/day of sulfuric acid.

This permit does not contain any federal regulations, but does contain four special conditions, as detailed below:

- Special Condition #1: this condition requires the permittee to conduct performance testing in accordance with the procedures outlined in this permit condition. None of the conditions specified in SC #1 have been included in this operating permit, as they are one time requirements and have been satisfied.
- Special Condition #2: this condition requires the permittee to use the condenser on the alkyl separator and filtration hold tank (emission point PR-22) at all times when the processes are in operation, and to maintain the condenser in accordance with the design criteria, which are the basis of this construction permit. This condition also requires the permittee to establish the ranges of chilled water flow rate and exit gas temperature from the condenser to achieve the VOC control specified in the application. The chilled water flow rate from the condenser shall be monitored once per shift to ensure it is operating within this range. This condition has not been included in this operating permit as it was reiterated in Construction Permit #062000-019, Special Conditions #7 and 8.
- Special Condition #3: this condition requires the permittee to record the chilled water flow rate once per shift, as well as any condenser downtime events, the cause of such events, and the reasons for any out of range flow rates and any corrective actions taken. This condition has not been included in this operating permit as it was reiterated in Construction Permit #062000-019, Special Conditions #7 and 8.
- Special Condition #4: this condition states the permittee shall develop an odor mitigation plan if required by the Director. This condition has been included in this operating permit as an emission unit specific permit condition.

6. Construction Permit 062000-019

This permit was issued December 9, 1998, to authorize the installation of new equipment to increase the production rate of PROWL® herbicide. These modifications will remove bottlenecks in the process so the maximum output of the SAR system can be utilized. These modifications will occur in different sections of the process, as described below:

Section 130: three existing nitrators will be replaced with larger units. Emissions from the new nitrators will be directed through the existing fume handling system to the plant's incinerators. Two new xylene nitration product washers will be added creating two new emission points (PR-94, PR-95).

Section 140:a new 30,000 gallon fixed roof feed storage tank (PR-91) will be added to store a mixture of intermediate organic compounds. A new distillation polishing column will be added to improve recovery of product.

Section 150: a new 7,000 gallon fixed-roof tank (PR-93) used to store a dilute diethyl ketone containing solution will be added to this section.

Section 160: an alkyl nitrator will be added to this section.

Section 170: the existing tech PROWL®/AR200 and tech PROWL®/Aerosol OT blending systems will be moved from the PROWL® production area to the Crop Protection Products (CPC) area. The PROWL®/Aerosol OT tank currently designated as PR-62 will now be identified as CPC-32.

SAR System:As a result of modifications made to this system permitted in CP0997-003, production capacity increased from 200 to 260 tons per day. Process bottlenecks that existed at the time of this permit effectively limited production to 225 tons per day. The additional equipment added under this permit will allow this system to operate at 260 tons per day.
The permit applies 40 CFR Part 60 Subpart Kb to the 30,000 gallon tank in Section 140 (PR-91).
The permit also contains eleven special conditions, as explained below:

- Special Condition #1: this condition limits emissions of NO_x from the SAR System Stack (PR-51) to less than 244 tons in any consecutive 12-month period. This condition has been superseded by Construction Permit Amendment 062000-019B
- Special Condition #2: this condition limits emission of SO_x from the SAR System Stack (PR-51) to less than 186 tons per any consecutive 12-month period. This condition has been superseded by Construction Permit Amendment 062000-019A..
- Special Condition #3: this condition requires the permittee to conduct stack testing to determine the emission rate of NO_x from the SAR System Stack (PR-51), and requires that the emission factor developed during testing be used to demonstrate compliance with special condition #1. This condition has not been incorporated into this operating permit, as it is a one time requirement and has been satisfied.
- Special Condition #4: this condition requires the permittee to use a CEMS to monitor the SO_x emissions from the SAR System Stack to demonstrate compliance with special condition #2. This condition has been included in this operating permit as an emission unit specific permit condition.
- Special Condition #5: this condition contains the stack testing procedures for the testing required in SC #3. These conditions have not been incorporated into this operating permit, as they are one time requirement and have been satisfied.
- Special Condition #6: this condition requires the permittee to operate the CEMS in accordance with Performance Specification 2 of 40 CFR Part 60 Appendix B. This condition has been included in this operating permit as an emission unit specific permit condition.
- Special Condition #7: this condition requires the permittee to use the condenser implemented on the alkyl separator and filtration hold tank (PR-22) at all times when these processes are in operation, and to maintain the condenser in accordance with the design criteria as detailed in the application. This condition also requires the permittee to determine the ranges of chilled water flow rate and exit gas temperature from the condenser required to demonstrate the design conditions for the VOC control included in the permit application. This condition has been included in this operating permit as an emission unit specific permit condition.
- Special Condition #8: this condition requires the permittee to measure and record the chilled water flow rate from the condenser at least once per shift. Any reasons for any out of range flow rates and corrective actions shall be recorded. This condition has been included in this operating permit as an emission unit specific permit condition.
- Special Condition #9: this condition requires the permittee to record the NO_x emissions from the SAR System Stack (PR-51) to demonstrate compliance with special condition #1. This condition has been superseded by Construction Permit Amendment 062000-019B
- Special Condition #10: this condition requires the permittee to record the SO_x emissions from the SAR System Stack (PR-51) to demonstrate compliance with special condition #2. This condition has been superseded by Construction Permit Amendment 062000-019A.

- Special Condition #11: this condition contains a 10 day reporting requirement for the exceedance of any emission limit specified in this permit. This condition has been included in this operating permit as an emission unit specific permit condition.

7. Construction Permit Amendment 062000-019A, Issued January 16, 2009
   This amendment was issued to reduce the reporting burden of Construction Permit 062000-019, which requires the permittee to report excess sulfur dioxide (SO_2) emissions above 4.0 lbs/ton for the SAR plant during start-up if these excess emissions last for more than one hour. However, due to the SAR plant design, the plant is not capable of avoiding excess SO_2 emissions when the sulfur dioxide to sulfur trioxide (SO_3) converter operating temperature drops below minimum, which occurs even in short duration shut downs. Sulfur dioxide emissions routinely exceed the 4.0 lbs/ton limit during start-up until the SO_2 to SO_3 converter warms up to normal operating temperature and the conversion efficiency is restored. The special conditions of this amendment supersede Special Conditions 2 and 10 of Construction Permit 062000-019. These changes do not result in any emissions increase.
8. Construction Permit Amendment 062000-019B, Issued June 10, 2009
   This amendment was issued to clarify the nitrogen oxide (NOx) emissions from the SAR process. The SAR facility has several large heat exchangers used to remove process heat in the conversion of sulfur dioxide gas to sulfur trioxide gas and subsequent absorption o the sulfur trioxide into water to make sulfuric acid. During the operation of the heat exchangers, solids containing metal corrosion products in combination with the nitric and sulfuric oxides accumulate in the heat exchangers. These solids can cause accelerated corrosion of the heat exchanger metal when they are exposed to moisture from the air during periodic maintenance. Periodically the solids need to be removed from the heat exchangers through a cleaning process to prevent excessive corrosion. The heat exchangers are cleaned by opening the unit and spraying the solids with water, which washes the unit and dissolves the solids. The cleaning process must be done rapidly to avoid excessive corrosion of the exchanger metal by the resulting dilute sulfuric acid. This cleaning process is expected to generate nitrogen oxide fumes from the acid residues. If these NOx emissions are included in the SAR plant NOx limit, then burdensome CERCLA reporting could be eliminated. This amendment clarifies that the NOx emissions from the heat exchanger cleaning process are included in the 244 ton NOx per year limit established in Construction Permit 062000-019. The conditions of this amendment supersede Special Conditions 1 and 9 of Construction Permit 062000-019.

<u>New Source Performance Standards (NSPS) Applicability</u>

40 CFR Part 60 Subpart Cd-Emissions Guidelines and Compliance Terms for Sulfuric Acid Production Units

This regulation applies to existing "sulfuric acid production units" as defined in 40 CFR Part 60 Subpart H. The SAR plant does not meet this definition, therefore this regulation does not apply.

40 CFR Part 60 Subpart E-Standards of Performance for Incinerators

This regulation was applied in Construction Permit #1189-001. However, the Prowl "C" incinerator is currently regulated under 40 CFR Part 60 Subpart EEE-Hazardous Waste Combustors, which is more stringent. Therefore, this regulation does not appear in the operating permit.

40 CFR Part 60 Subpart H-Standards of Performance for Sulfuric Acid Plants

This regulation applies to a sulfuric acid production unit that was constructed or modified after August 17, 1971. A Sulfuric acid production unit means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides

and mercaptans, or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds. This installation does not meet this definition, therefore this rule does not apply.

The following information was provided by BASF in correspondence dated between July 29, 2008, and July 31, 2008:

> The Hannibal SAR Facility was commissioned in 1989 to treat spent sulfuric acid from the Hannibal plant's pendimethalin herbicide process. The spent acid, containing small amounts of nitric acid and organics, is burned in a combustor to destroy the organics and form sulfur dioxide (SO_2). The sulfur dioxide is then catalytically converted to sulfur trioxide (SO_3), which is subsequently absorbed into water to produce 98% sulfuric acid. All of this acid is recycled back to the pendimethanlin process. A small amount of unabsorbed SO_2 is emitted from the SAR Emission Point PR-51.
>
> The spent sulfuric acid mentioned above is not used in the alkylation step. There is no sulfuric acid feed to the alkylation step, nor is there any spent sulfuric acid exiting the alkylation step that goes to the SAR facility. The alkylation step does use a solid organic sulfonic acid as a catalyst, but this material generally breaks down and is removed through purges to waste. It is not recovered or recycled.
>
> The pendimethalin process uses sulfuric acid, combined with nitric acid, to catalyze nitration of organic chemicals. The sulfuric acid is not consumed, since it is only a catalyst. However, the nitric acid is depleted as it reacts with the organics. Exiting the nitration reactions are spent sulfuric acid streams (diluted with water of reaction from the nitrations) which contain some remaining nitric acid not consumed in the nitration and some organics dissolved in the spent acid. This diluted sulfuric acid, containing this residual nitric acid and organics, is the spent sulfuric acid fed to the SAR facility. There it is purified and regenerated to make 98% sulfuric acid that is recycled entirely back to the pendimethalin nitration reactions. There is no net export of sulfuric acid from the SAR facility to any other process. In fact, there is a gradual loss over time (primarily through a purge stream to the NPDES to remove the excess water from the nitration reactions) which must be replenished occasionally with purchased fresh sulfuric acid.
>
> While the initial construction permit indicated Subpart H did apply, subsequent discussions between BASF and the MoDNR established that this particular facility removes oxides of nitrogen from the spent acid, which is a processing step unique to this particular sulfuric acid facility. As such, the unit includes a reduction section downstream of the acid-to-SO_2 combustion section that reduces nitrogen oxides to elemental nitrogen. This reduction feature is outside of the scope of what 40 CFR 60.81(a) covers. This nitrogen oxide reduction feature apparently resulted in a non-applicability decision by the MoDNR regarding Subpart H. However, at the time this non-applicability of Subpart H was established, BASF agreed to continue to meet the SO_2 emissions limits set in Subpart H, without Subpart H itself actually being applicable.

A review of construction permits shows that Construction Permit 0488-001 was issued to authorize installation of the SAR plant. This construction permit does state that Subpart H applies. Construction Permit 0997-003 and CP062000-019 both state that Subpart H does not apply.

The sulfuric dioxide and sulfuric acid mist emission limits are also imposed by Construction Permits 0488-001, and 0997-003. These limitations appear in the Operating Permit as Permit Condition EU0111-001.

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978
40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984
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.

The applicability of these regulations is shown in Table 17.

Table 17: Applicability of 40 CFR Part 60 Subparts K, Ka, and Kb to the PROWL-SAR Production Plant

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
EU0108	PR-01	o-Xylene Storage Tank (process #110-002); 1,567,000 gallon capacity; installed 1975-76; controlled by vent condenser (process #631-021)	Not subject to K, Ka, or Kb; see note 4
w/o	PR-02	45% Potassium Hydroxide Tank (process #110-005); 20,000 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	PR-03	20% Sodium Hydroxide Tank (process #110-008); 191,000 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	PR-04	32% HCl Storage Tanks (2) (process #110-011 A/B); 25,000 gallon capacity each tank; installed 1993 [B tank is out of service]	Not subject to K, Ka, or Kb; see note 1
w/o	PR-05	DEK Storage Tank (process #110-014); 210,000 gallon capacity; installed 1975-76; controlled by vent condenser (process #631-117)	Not subject to K, Ka, or Kb; see note 1
w/o	PR-06	4-Nitro-o-xylene Storage Tank (140-032); 15,400 gallon capacity	Not subject to K, Ka, or Kb; see note 2
w/o	PR-08	Nitric Acid Storage Tanks (2) (process #110-038A/B); 62,000 gallon capacity each tank; installed 1975-76; vents to vapor return and conservation vent	Not subject to K, Ka, or Kb; see note 1
w/o	PR-09	DEK Day Tank (process #200-018); 41,800 gallon capacity; installed 1975-76; controlled by vent condenser (process #631-111)	Not subject to K, Ka, or Kb; see note 1
w/o	PR-11	98% Sulfuric Acid Storage (process #210-008); 31,600 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	PR-12	Aqueous Recycle Box (process #002-018); contains low concentration of organics with VP<10 mm Hg @45C; capacity <50 gallons	Not subject to K, Ka, or Kb; see note 3
w/o	PR-13	Mono-nitro-xylene (MNOx) Extraction/Purification (Washer #1 process #002-019); 352 gallon capacity process vessel; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	Not subject to K, Ka, or Kb; see note 3
w/o	PR-14	Aqueous Recycle Box; contains low concentration of organics with VP<10 mm Hg @45Cl; capacity <50 gallons	Not subject to K, Ka, or Kb; see note 3
w/o	PR-15	Mono-nitro-xylene (MNOx) Extraction/Purification (Washer #1 process #002-021); 352 gallon capacity process vessel; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	Not subject to K, Ka, or Kb; see note 3

Table 17: con't

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
w/o	PR-16	Demin/Recycle water tank (process #130-005); 530 gallon capacity; Contains traces amounts of o-xylene CAS 95476	Not subject to K, Ka, or Kb; see note 3
w/o	PR-17	Mixed Mono-nitro-xylene (MNOx) storage tank (process #140-001); 23,800 gallon capacity	Not subject to K, Ka, or Kb; see note 5
w/o	PR-18	4-Nitro-o-xylene Storage Tank (process #140-032); 15,400 gallon capacity	Not subject to K, Ka, or Kb; see note 2
w/o	PR-19	3-Nitro-o-xylene Storage Tank (process #170-069); 7,500 gallon capacity	Not subject to K, Ka, or Kb; see note 2
w/o	PR-21	Reductive Alkylation-Alkylation Catch Tank Vent (process #150-030); 500 gallon capacity	Not subject to K, Ka, or Kb; see note 3
EU0109	PR-22	Reductive Alkyl Separator (process #150-011) & Filtration Hold Tank Vent (process #150-100);& Vent from Purge Catalyst Filter (process #150-009 was PR-26); controlled by vent condenser (process #150-104)	Not subject to K, Ka, or Kb; see note 3
w/o	PR-23	Catalyst Hopper (process #150-007A) & Catalyst Slurry Tanks (process #150-006A/B)	Not subject to K, Ka, or Kb; see note 3
w/o	PR-25	Purge Catalyst Scale Tank (process #150-008)	Not subject to K, Ka, or Kb; see note 3
w/o	PR-29	Crude Alkyl Xylidine Storage Tank (process #150-014)	Not subject to K, Ka, or Kb; see note 5
w/o	PR-31	Alkyl Product Storage Tank (process #150-021); 12,000 gallon capacity; currently out of service	Not subject to K, Ka, or Kb; see note 2
w/o	PR-32	Acetone Storage Tank (process #150-038); 10,800 gallon capacity; (1978); controlled by vent condenser (process #631-050)	Not subject to K, Ka, or Kb; see note 1
w/o	PR-36	Alkyl Nitration Drain Tank (process #003-068); 4,600 gallon capacity [contains water only except in case of emergency reactor dump]	Not subject to K, Ka, or Kb; see note 2
w/o	PR-39	Organic Waste Hold Tank (633-001); 38,600 gallon capacity	Not subject to K, Ka, or Kb; see note 5
w/o	PR-47, PR-53, or PR-54	Strong Spent Acid Storage Tank (process #210-001); controlled by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 1
w/o	PR-47, PR-53, or PR-54	Weak Spent Acid Storage Tank (process #170-070); controlled by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 1
w/o	PR-43	98% Product Acid Tank (process #220-051);	Not subject to K, Ka, or Kb; see note 1
w/o	PR-47, PR-53, or PR-54	Mixed Acid Storage Tanks (2) (process #120-007 & 120-009); 31,700 gallon capacity;each tank; Mix of nitric acid (CAS 7697-37-2), sulfuric acid (7664-93-9), water; controlled by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 1
w/o	PR-47, PR-53, or PR-54	Strong Spent Acid Storage Tank(process #220-V27); controlled by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 1
w/o	PR-47, PR-53, or PR-54	Weak Spent Acid Storage Tank (process #220-V26); controlled by RCRA Incinerators	Not subject to K, Ka, or Kb; see note 1
EU0113	PR-47, PR-53, or PR-54	Ethylene Dichloride Storage Tank (process #170-042); 30,300 gallon capacity; 1995; controlled by RCRA Incineratos	Not subject to K, Ka, or Kb; see note 4
w/o	PR-63	Washed MNOX Storage Tank (process #140-101); 23,690 gallon capacity; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	Not subject to K, Ka, or Kb; see note 5
w/o	PR-90	Alkyl Xylidine Storage tank (process #150-060); 120,000 gallon capacity	Not subject to K, Ka, or Kb; see note 5

Note 1: The liquid contained in the tank does not meet the definitions of volatile organic liquid or petroluem liquid
Note 2: The tank does not satisfy the size requirements in the applicability section of the rule.
Note 3: Process tanks are exempt.

Note 4: These tanks are subject to 40 CFR Part 63 Subpart MMM, and as such are required to comply only with the provisions of that MACT. [see 63.1360(i)(3)]
Note 5: These tanks don't meet the capacity and vapor pressure requirements in the applicability section of the rule.

Maximum Available Control Technology (MACT) Applicability
40 CFR Part 63 Subpart MMM-National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

PROWL/SAR Manufacturing Facility
This facility produces the active ingredients for several herbicide products in the imidazolinone family (ARSENAL, ASSERT, RAPTOR). This process involves several chemical reactions (condensation, hydrolysis, cyclization, and esterfication) as well a precipitation, stripping, distillation, and centrifugation. The starting raw materials and the chemical processes differs for each product. All subject units meet the definition of existing. The applicability of this regulation is detailed in the table below:

Table 18: Applicability of 40 CFR Part 63 Subpart MMM to the PROWL-SAR Production Plant

EU#	Point #	Unit Description	Process #	Explanation
EU0108	PR-01	o-Xylene Storage Tank; 1,567,000 gallon capacity; installed 1975-76	110-002	No applicable requirements-see note 2
w/o	PR-02	45% Potassium Hydroxide Tank; 20,000 gallon capacity	110-005	Not subject to MMM-see note 1
w/o	PR-03	20% Sodium Hydroxide Tank; 191,000 gallon capacity	110-008	Not subject to MMM-see note 1
w/o	PR-04	32% HCl Storage Tanks (2); 25,000 gallon capacity each tank; installed 1993 [B tank is out of service]	110-011 A/B	Not subject to MMM-see note 1
w/o	PR-05	DEK Storage Tank; 210,000 gallon capacity; installed 1975-76	110-014	Not subject to MMM-see note 1
w/o	PR-06	4-Nitro-o-xylene Storage Tank; 15,400 gallon capacity	140-032	Not subject to MMM-see note 1
w/o	PR-08	Nitric Acid Storage Tanks (2); 62,000 gallon capacity each tank; installed 1975-76	110-038A/B	Not subject to MMM-see note 1
w/o	PR-09	DEK Day Tank; 41,800 gallon capacity; installed 1975-76	200-018	Not subject to MMM-see note 1
w/o	PR-11	98% Sulfuric Acid Storage; 31,600 gallon capacity	210-008	Not subject to MMM-see note 1
w/o	PR-12	Aqueous Recycle Box; contains low concentration of organics with VP<10 mm Hg @45C; capacity <50 gallons	002-018	Not subject to MMM-see note 3
w/o	PR-13	Mono-nitro-xylene (MNOx) Extraction/Purification (Washer #1); 352 gallon capacity process vessel; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	002-019	Not subject to MMM-see note 3
w/o	PR-14	Aqueous Recycle Box; contains low concentration of organics with VP<10 mm Hg @45Cl; capacity <50 gallons		Not subject to MMM-see note 3
w/o	PR-15	Mono-nitro-xylene (MNOx) Extraction/Purification (Washer #1); 352 gallon capacity process vessel; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	002-021	Not subject to MMM-see note 3
w/o	PR-16	Demin/Recycle water tank; 530 gallon capacity; Contains traces amounts of o-xylene	130-005	Not subject to MMM-see note 3
w/o	PR-17	Mixed Mono-nitro-xylene (MNOx) storage tank; 23,800 gallon capacity	140-001	Not subject to MMM-see note 1
w/o	PR-18	4-Nitro-o-xylene Storage Tank; 15,400 gallon capacity	140-032	Not subject to MMM-see note 1
w/o	PR-19	3-Nitro-o-xylene Storage Tank; 7,500 gallon capacity	170-069	Not subject to MMM-see note 1
w/o	PR-20	Reductive Alkylation-Alkylation Seal Pot for Reactors process #150-002A/B	150-004	Not subject to MMM-see note 4
w/o	PR-21	Reductive Alkylation-Alkylation Catch Tank VenT; 500 gallon capacity	150-030	Not subject to MMM-see note 4
EU0109	PR-22	Reductive Alkyl Separator (process #150-011) & Filtration Hold Tank Vent (process #150-100);& Vent from Purge Catalyst Filter (process #150-009 was PR-26)	as listed	Not subject to MMM-see note 4

Table 18 con't

EU#	Point #	Unit Description	Process #	Explanation
w/o	PR-23	Catalyst Hopper (process #150-007A) & Catalyst Slurry Tanks (process #150-006A/B)	as listed	Not subject to MMM-see note 4
w/o	PR-24	Catalyst Hopper	150-007B	Not subject to MMM-see note 4
w/o	PR-25	Purge Catalyst Scale Tank	150-008	Not subject to MMM-see note 4
w/o	PR-27	Polishing Filter & Sample Return	150-029A/B	Not subject to MMM-see note 4
w/o	PR-29	Crude Alkyl Xylidine Storage Tank	150-014	Not subject to MMM-see note 1
w/o	PR-30	Seal Pot Vent	150-018	Not subject to MMM-see note 4
w/o	PR-31	Alkyl Product Storage Tank; 12,000 gallon capacity; currently out of service	150-021	Not subject to MMM-see note 1
w/o	PR-32	Acetone Storage Tank; 10,800 gallon capacity; (1978)	150-038	Not subject to MMM-see note 1
EU0110	PR-47, PR-53, or PR-54	Nitration Seal Pot	003-055	Subject to MMM as a process vent
w/o	PR-36	Alkyl Nitration Drain Tank; 4,600 gallon capacity [contains water only except in case of emergency reactor dump]	003-068	Not subject to MMM-covered under SSM
w/o	PR-39	Organic Waste Hold Tank; 38,600 gallon capacity	633-001	Not subject to MMM-see note 1
w/o	PR-47, PR-53, or PR-54	Strong Spent Acid Storage Tank	210-001	Not subject to MMM-see note 4
w/o	PR-47, PR-53, or PR-54	Weak Spent Acid Storage Tank	170-070	Not subject to MMM-see note 4
w/o	PR-43	98% Product Acid Tank	220-051	Not subject to MMM-see note 1
w/o	PR-47, PR-53, or PR-54	Mixed Acid Storage Tanks (2); 31,700 gallon capacity;each tank; Mix of nitric acid, sulfuric acid, & water	120-007 & 120-009	Not subject to MMM-see note 4
w/o	PR-47, PR-53, or PR-54	Strong Spent Acid Storage Tank	220-V27	Not subject to MMM-see note 4
w/o	PR-47, PR-53, or PR-54	Weak Spent Acid Storage Tank	220-V26	Not subject to MMM-see note 4
EU0111	PR-51	SAR Furnace; 1997; Natural Gas Fired	220-K31	Not subject to MMM-see note 5
EU0112	PR-52	SAR Combustion Air Preheater; 1989; Natural Gas Fired	220-X41	Not subject to MMM-see note 5
EU0113	PR-47, PR-53, or PR-54	Ethylene Dichloride Storage Tank; 30,300 gallon capacity; 1995	170-042	Subject to MMM as a Group 1 storage vessel
w/o	PR-55	Plant Fume System Vent (vent to atmosphere) [Only Vents in Case of an SSM Event]		Not subject to MMM-covered under SSM
EU0114	PR-56	Prowl process bldg vent (process fugitives)		Subject to MMM as Equipment Leaks
EU0115	PR-47, PR-53, or PR-54	Separation I Distillation Seal Pot	140-012	Subject to MMM as a process vent
w/o	PR-63	Washed MNOX Storage Tank; 23,690 gallon capacity; Organics have vapor pressure < 10 mmHg at 25 C; < 5% o-xylene	140-101	Not subject to MMM-see note 1
w/o	PR-86	Ethylene Dichloride Railcar Unloading [Railcar Pressurized with Nitrogen]		Not subject to MMM-see note 5
w/o	PR-87	Diethyl Ketone Railcar Unloading [Railcar Pressurized with Nitrogen]		Not subject to MMM-see note 5
w/o	PR-88	o-Xylene Railcar Unloading [Railcar Pressurized with Nitrogen]		Not subject to MMM-see note 5
w/o	PR-89	32% Hydrochloric Acid Tank Trailer Unloading		Not subject to MMM-see note 5
w/o	PR-90	Alkyl Xylidine Storage tank; 120,000 gallon capacity	150-060	Not subject to MMM-see note 1

Note 1: 63.1360(d)(5)(vii) states that vessels storing material that contains no organic HAP or contains organic HAP as impurities only are exempt from MMM.
Note 2: The MACT contains two categories of storage vessels: Group 1 and Group 2. Although these tanks are subject to the MACT, they have no applicable requirements.
Note 3: Does not meet definition of process vent, has potential emissions of less than 50 ppmv HAP [see §63.1361]
Note 4: Does not meet definition of process vent, does not emit HAP [see §63.1361].
Note 5: These activities are not covered by this regulation.

Other Regulatory Determinations

1. Items requested through OP application

The original construction permit for this facility (CP 0488-001) indicated that the hydrogen sulfide fumes from the THIMET® and COUNTER® Plant should be directed to the SAR Plant for recovery. As a condition of this operating permit, BASF Agri Chemicals - Hannibal Plant requested that this requirement be discontinued as a result of BASF Agri Chemicals - Hannibal Plant achieving equivalent sulfur dioxide emissions from other on-site sources. This request cannot be granted through the operating permit program. This topic is discussed in greater detail in the plant description section of this Statement of Basis.

BASF Agri Chemicals - Hannibal Plant is proposing as a condition of this operating permit to increase the permitted production capacity for the SAR Plant to an equivalent rate of 78,475 tons per year of 100% sulfuric acid. This will result in a projected increase in emissions from the SAR Plant of 16.95 tons per year of sulfur dioxide emissions and 0.63 tons per year of sulfuric acid mist. Both of these projected emissions increases are below deminimis permit levels for these regulated compounds. This proposal cannot be granted through the operating permit review process. Permit conditions of existing construction permits may not be changed through the operating permit review process in such a way as to result in an increase in emissions. In order for BASF Agri Chemicals - Hannibal Plant to increase the production of the sulfuric acid regeneration plant, it will be required to undergo a review under the New Source Review (NSR) process. Upon receipt of the NSR permit, BASF Agri Chemicals - Hannibal Plant will then be required to apply for, and receive, a significant permit modification to its operating permit in order to incorporate this emissions increase.

BASF Agri Chemicals - Hannibal Plant committed in its operating permit application to continue operating at the present production rate which has been demonstrated to meet the present permit limits (4 pounds of sulfur dioxide per ton of acid produced and 0.15 pounds of acid mist per ton of acid produced) until BASF Agri Chemicals - Hannibal Plant has performed an MDNR-approved performance test at the proposed production rates to demonstrate compliance with applicable limits. However, because this production increase cannot be granted from within the operating permit, due to the increase in emissions resulting from the production increase, BASF Agri Chemicals - Hannibal Plant will instead need to pursue this emissions increase through the New Source Review process.

By copy of its operating permit application, BASF Corporation - Hannibal Plant requested that the operating conditions for the PROWL® plant expansion permit (Permit No. 0690-005) be revised to reflect compliance with applicable regulations for obtaining deminimis permits, which is to maintain any increase in emissions below 40 tons per year volatile organic compounds above the originally permitted VOC emissions levels included in Permit No. 0276-003. There

were no separate VOC emission limits established in Permit No. 0690-005 for these facilities. Altering the emissions limitation in this manner would limit total VOC emissions from the PROWL® plant to an increase of just less than 40 tons per year for compliance with deminimis permitting requirements. The type of permit modification that is requested cannot be granted through either the operating permit program or the New Source Review program.

2. Performance Testing

A complete performance test on the sulfuric acid regeneration (SAR) plant (PR-51) was performed in April/May, 1993. The testing was performed by Midwest Research Institute. This testing demonstrated compliance with applicable regulations and the SAR Plant construction permit requirements [see CP 0488-001] for sulfur dioxide, acid mist emissions, and nitrogen oxide emissions. The performance test results were approved by the MDNR APCP Compliance Section in January, 1994.

An additional performance test report was performed in November 2000 by ENSR International. The additional emissions testing was required by Construction Permit #062000-019, which authorized modifications and a production increase to the PROWL® Plant. In addition, testing was performed to verify compliance of the SO_2 CEM with the requirements of Performance Specification 2 in Appendix B of 40 CFR 60. A Relative Accuracy Test Audit was performed November 7, 2001, by ENSR International on the SO_2 CEMS installed on the SAR facility. MDNR approved the performance testing and relative accuracy test audit results.

3. Regulatory Applicabilities

10 CSR 10-3.060, *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*

This regulation applies to EU0112, the SAR Combustion Air Preheater (PR-52). This regulation does not apply to EU0111, the SAR Furnace (PR-51), as it does not meet the definition of indirect heating. Compliance with this regulation is demonstrated in Table 25 and 26..

10 CSR 10-6.620, *Restriction of Emission of Sulfur Compounds*

The sulfur emissions from the PROWL-SAR facilities are emitted through the SAR Furnace stack (PR-51). The emissions from the combustion of natural gas and of the sulfuric acid regeneration process all pass through this stack. Due to the combustion units only combusting natural gas, these units are exempt from this regulation per 6.260(1)(A)2. However, sulfur emissions from this process are regulation by existing construction permits, and these limitations appear as emission unit specific permit conditions in the operating permit.

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*

This regulation does not apply to the emission units within the PROWL-SAR plants because none of these units meet the definition of process weight.

Central Treatment Systems

The centralized wastewater treatment facilities are separated into two distinct areas: the North Waste Management Area and the South Waste Management Area. The North Waste Management Area consists of the A (PR-53), B (PR-54), and C (PR-47) incinerators, and eight waste storage tanks. The South Waste Management Area (THIMET®/COUNTER® Plant) consists of three waste storage tanks

and the D incinerator (TC-01), with two backup flares. The D Incinerator was formerly known as the TCI Incinerator. A short description of each incinerator and its associated control devices are presented in this section. Regulatory issues are explained elsewhere in this Statement of Basis.

These incinerators are permitted under RCRA hazardous waste management regulations in RCRA Part B Permit No. MOD050226075, as amended on September 14, 2004. On September 14, 2004, BASF submitted a Class 1 permit modification meeting the requirements of 40 CFR 270.42. In the Class 1 permit modification request, BASF requested technology changes and changes to RCRA permit provisions to meet the standards under 40 CFR Part 63, Subpart EEE for all pollutants except for particulate matter. Because the request was not approved or denied within 90 days of receipt by the Director, the request was deemed approved pursuant to 40 CFR 270.42(j),. Accordingly, in January/February 2005, BASF transitioned from the requirements of the facility's Part B permit under the RCRA program to the operating and emission requirements of 40 CFR 63 Subpart EEE for all pollutants except for particulate matter.

Effluents from all of the incinerator scrubbing systems (A, B, C, and D) are discharged through the plant NPDES effluent discharge system in accordance with permits issued under the authority of Section 402 of the Clean Water Act.

APCP records indicate the presence of a solid waste incinerator manufactured by Brule, which is sometimes referred to as incinerator E. The installation did previously have a Brule incinerator, but this is not the E incinerator. The E incinerator was a proposed unit that was never installed. The Brule incinerator was decommissioned and has been removed from site.

A, B, C, and D Incinerators

- The A and B incinerators (John Zink design) are similar units. The incinerators are vertical down-fired incinerators designed to burn liquid and gaseous wastes. Permitted waste capacity for each unit is 21,070 pounds per hour. These incinerators were put into service in 1975 and each has a maximum design rate of 74.0 MMBTU/hr. The 2008-2009 CPTs updated these numbers to reflect the following: A& B – aqueous 18,801, organic 4,269 – A/B are correct. C – 21,300 aqueous, 5,464 organic = 26,764. D – aqueous 16,800, organic 2994 = 19,794
- The C incinerator (T-Thermal design) is a vertical down-fired incinerator designed to burn liquid and gaseous wastes. Permitted waste incineration capacity for this unit is approximately 27,127 pounds per hour. This incinerator was put into service in 1990 and has a maximum design rate of 89.8 MMBTU/hr.
- The D incinerator (Trane design) is a vertical down-fired incinerator designed to burn liquid and gaseous wastes. Permitted waste incineration capacity for this unit is 19,795 pounds per hour. This incinerator was put into service in 1976 and has a maximum design rate of 54.0 MMBTU/hr.

The incinerators are designed to use natural gas as the main auxiliary fuel with fuel oil as a back-up auxiliary fuel. The control devices for the combustion gases are described in Table 19. The overall scrubbing system is designed to remove acid gases and particulate matter emissions in addition to any entrained liquids. The RCRA Permit (MODO50226075), as amended through the September 14, 2004 submittal, and 40 CFR 63 Subpart EEE provide extensive permit monitoring requirements for particulate removal system and acid gas scrubbing system operations (e.g. scrubber pressure drop, scrubber flows,

scrubber water pH, etc.) as well as overall incineration system monitoring for the incinerators. These records will be utilized to provide monitoring information for this operating permit

The existing atomizing media in use for feeding organic waste/supplemental liquid fuel on each of the four incinerators at the installation is steam. On May 21, 2003, the permittee submitted a request to modify the incinerators to use air for the atomization of organic waste feeds in place of the steam atomization. The original design of the A, B, and D incinerators was to utilize No. 6 fuel oil as the primary fuel source. The C organic waste feed system was also designed with steam atomization to accommodate potential use of No. 6 fuel oil. The installation chose not to utilize No. 6 fuel oil as a supplemental fuel prior to conducting the RCRA trial burns for these units. The plant has removed the No. 6 fuel oil feed systems from the incinerators.

The primary supplemental liquid fuel for the A, B, and C incinerators is a non-RCRA nitroxylene-based organic distillate stream from the PROWL® plant. These units also utilize an organic waste stream from the Pyrrole/XXXXX facility as a supplemental fuel. The D incinerator utilizes an organic waste stream that is generated from process wastes from several of the installation's production facilities.

The incinerators are operated by integrated computer control systems that automatically monitor and control incinerator operation. This includes indicating and recording devices for monitoring flows, pressures, temperatures, and related critical operating parameters. The computer control systems provide operational information and continually monitor and control incinerator operations in order to maintain compliance with permitted limits.

In order to provide proper and effective emission control, each incinerator is equipped with an air pollution control system (APCS). Following is a general description of the APCS equipment listed in order from the combustion zone to the point of discharge (out the stack):

Table 19: Control devices for incinerators

A and B Units	C Unit	D Unit
Quench Tank	Quench Tank	Quench Tank
Entrainment Separator	Entrainment Separator	Entrainment Separator
Collision Scrubber	Venturi Scrubber	Venturi Scrubber
Entrainment Separator	Entrainment Separator	Entrainment Separator
		Packed Scrubber

The Hannibal Plants air pollution control systems are very effective in scrubbing combustion gases. These systems typically have been demonstrated to:

- achieve exhaust gas stream particulate concentrations in the range of 0.03 - 0.06 grains /dry standard cubic foot (gr/dscf). The present permitted upper limit is 0.08 gr/dscf,
- achieve hydrogen chloride (HCL) emissions out the stack in the range of 0.2 - 0.7 lbs./hr.
- achieve greater than 99 % removal efficiency as HCL, and
- achieve greater than 99.99 % destruction and removal efficiency (DRE) for each principal organic hazardous constituent (POHC).

The hazardous waste combustor NESHAP standards include 99.99% DRE and specific limits for various emission parameters measured at the stack and corrected to 7% oxygen. Evaluation of the hazardous

waste combustion units capabilities to meet the hazardous waste combustor NESHAP standard are discussed in the NESHAP section of this Statement of Basis.

Modifications of A, B and D Incinerators
Modifications to the A and B Incinerators
By letter dated June 22, 2001, the applicant provided formal notification of its intent to make modifications to the John Zink A and B incinerators. The applicant's concern was that these units would be required to comply with the EPA regulations included in 40 CFR Part 63, Subpart EEE, National Emissions for Hazardous Air Pollutants from Hazardous Waste Combustors. These regulations require that hazardous waste combustors operate in compliance with applicable standards "at all times" when hazardous wastes are in the combustion chamber.

Special Permit Condition F. 8. on page 47 of the Hannibal Plant's existing RCRA Part B Permit provides for a maximum thirty-minute startup period for the John Zink A and B incinerator units during which time waste feeds are introduced prior to establishing final RCRA operating conditions. It was the applicant's preliminary interpretation that these regulations would require that the incinerators achieve the RCRA operating conditions prior to the introduction of hazardous waste into these units. The applicant evaluated several alternatives for achieving this operating constraint and determined that modification of the existing Calvert collision scrubber system on these units offered the best alternative control system.

To ensure continued compliance with Subpart EEE standards, the applicant replaced the existing fixed-throat Calvert units with a variable-throat Calvert unit on each incinerator. The new Calvert scrubbers are functionally equivalent to the existing Calvert scrubbers. The variable-throat units enable the incinerator operator to reduce the cross-sectional area of the scrubber at the lower air flow rates associated with startup conditions. This results in a higher-pressure drop and subsequent improved particulate removal capabilities at the lower airflow conditions in comparison to the existing fixed-throat units. As noted in a letter from Mr. Ron Patterson, who designed both the original Calvert scrubbers and the new variable-throat systems, the new systems are functionally equivalent to the existing unit.

The applicant also modified the entrainment separators on the A and B incinerators which are downstream from the Calvert collision scrubbers on these units. The purpose of the entrainment separators is to remove entrained liquid (e.g. water droplets) and associated particulate matter from the air stream exiting the Calvert scrubbers prior to emissions to the atmosphere. The applicant modified the existing entrainment separators to increase the cross-sectional area of the existing separators and to install a second similar section of entrainment separators immediately downstream of the new larger units. The waveforms were constructed as modular units which eliminates the requirement that each waveform blade be individually installed. The design of the entrainment separator waveform blades are the same as the existing units. The purpose of increasing the size of the existing separator is to improve the contact area and allow improved water droplet and subsequent particulate removal. The purpose of installing a second in-line waveform separator is to provide additional droplet removal for normal operations and to provide a full in-line backup to the first unit in case there would be any damage to the first unit that could allow potential short-circuiting of the first unit. The fabrication of the waveform sections as modular units eliminates any issues associated with potential misalignment of the waveform blades and reduces potential for short-circuiting. The modifications of the entrainment separators are functionally equivalent to the existing unit.

Modifications to the D Incinerator
By letter dated March 28, 2002, the applicant provided formal notification of its intent to make modifications to the Trane D incinerator. The modification was being implemented under the provisions outlined in 10 CSR Part 270 – Class 1 modifications (reference 40 CFR 270.42(a)(1)). The purpose of the modification is the replacement of the existing variable-throat venturi scrubber on the unit with a newer design venturi system. The applicant stated that the existing venturi scrubber on the D unit was approaching 25 years of use and was in need of replacement. The existing scrubber unit being was being replaced as a part of the applicant's ongoing equipment maintenance for the incineration system. The applicant proposed to replace the existing venturi with a T-Thermal Dual Variable Throat Venturi Scrubber similar in design to the venturi scrubber that the applicant had successfully employed on its T-Thermal C incinerator. The applicant also stated in the notification that "Trane" and "T-Thermal" are the same company, with "T-Thermal" being the current company name.

The replacement scrubber was designed to achieve equivalent or higher removal efficiencies at the same operating conditions that were established for the existing venturi scrubber for the D incinerator during the RCRA trial burn conducted on this unit. The new dual-throat design is presently used on the plant's Trane C incinerator and this unit has demonstrated compliance with the applicable RCRA particulate limits during the trial burns for the C incinerator. In addition to replacing the existing venturi on the D incinerator, the applicant will also be upgrading the existing scrubber water pumps for the venturi to ensure adequate operating capacity to provide scrubber water to the new venturi unit. The new scrubber system is being installed with consideration for the potential additional emission limitations that may be included in future EPA MACT regulations for hazardous waste combustors.

Construction Permit History

1. Construction Permit 1189-001
   This construction permit was issued November 6, 1989, to authorize construction of a liquid/fume incinerator, a waste storage tank, and associated equipment as part of the PROWL® Waste Management System, which will be known as the PROWL® "C" incinerator. The incinerator is rated at 73.5 MMBtu/hr, and will be designed to use either natural gas or fuel oil #6 as the supplemental fuel source, though natural gas will be the primary fuel. Initially, none of the waste feed materials to this unit were considered to be RCRA hazardous wastes; however, the unit was designed to handle RCRA hazardous waste. BASF is currently operating the C incinerator in accordance with system operating conditions demonstrated during the 2009 HWC MACT Comprehensive Performance Test, and the C incinerator is currently handling RCRA hazardous waste in accordance with all applicable regulations. The unit was constructed to the performance standard requirements of RCRA incineration facilities, which includes a minimum destruction removal efficiency (DRE) of 99.99%. Process ID 633-203 is the PROWL® aqueous feed storage tank, with a capacity of 127,000 gallons. Process ID 633-205 is the PROWL® "C" incinerator, which will be controlled by a venturi separator.
   The permittee will use offsets to meet the requirement of a net de minimis emissions increase. The permittee has permanently shut down the operation of the two nitric acid plants and the ammonium nitrate plant, effective July 1998.
   The permit applies NSPS Subpart E, Standards of Performance for Incinerators, and contains five special conditions. The NSPS is explained in detail in the NSPS section of this Statement of Basis, the special conditions, and there inclusion in the operating permit are explained below:

- Special Condition #1: this condition requires the incinerator undergo testing as specified in NSPS Subpart E. This condition is not included in the operating permit, as it duplicates the requirements of Subpart E.
- Special Condition #2: this condition requires the installation to use 315 tons of NO_x offsets. This condition has not been incorporated into this operating permit, as it is a one time requirement and has been satisfied. The installation has chosen to use 315 tons of NO_x offsets that it had obtained via dismantling the Chemico and Weatherly Nitric Acid Plants.
- Special Condition #3: this condition requires the installation to use 90 tons of PM offsets. This condition has not been incorporated into this operating permit, as it is a one time requirement and has been satisfied. The installation has chosen to use 90 tons of PM offsets that it had obtained via dismantling the Chemico and Weatherly Nitric Acid Plants
- Special Condition #4: this condition limits the combustion of fuel oil #6 to less than 360 hours per year. This condition is applied as an emission unit specific limitation in this operating permit.
- Special Condition #5: this condition requires the permittee to maintain records to demonstrate compliance with SC #4. This condition mandates a retention time of 2 years. This has been modified in the operating permit to comply with the recordkeeping requirements of 10 CSR 10-6.065 of five years.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

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.

This regulation applies to each storage vessel for volatile organic liquid storage which has a storage capacity greater than or equal to 75 m^3 (19,812.9 gallons). According to the definitions in the rule, a process tank is not a storage vessel [see 60.111b]

On October 15, 2003, the applicability section of this subpart was modified so that this subpart no longer applies to tanks with capacities of less than 75m^3. This amendment also exempted process tanks from this rule.

Table 40: Applicability of K, Ka, and Kb to Central Treatment Systems

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
EU0116	PR-95/53/54/47	"A" Aqueous Waste Storage Tank (process #633-003); 276,000 gallon capacity; installed 1975-76; controlled by condenser (process #631-116) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0117	PR-95/53/54/47	"B" Aqueous Waste Storage Tank (process #633-203); 127,000 gallon capacity; installed 1989; controlled by Condenser (process #631-203) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0118	PR-95/53/54/47	"C" Aqueous Waste Storage Tank (process #633-060); 498,000 gallon capacity; installed 1975-76; controlled by Condenser (process #631-060) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank (process #633-401); 24,800 gallon capacity; Installed 1999; controlled by condenser (process #631-407) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank (process #633-421); 14,000 gallon capacity; Installed 1999; controlled by condenser (process #631-427) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0119	PR-39	Organic Waste Storage Tank (process #633-001); 38,600 gallon capacity; installed 1975-76; vented to atmosphere	Not subject to K, Ka, or Kb; see note 1
EU0120	PR-95/53/54/47	"A" Waste Blend Tank (process #633-460A); controlled by condenser (process #631-466A) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0121	PR-95/53/54/47	"B" Waste Blend Tank (process #633-460B); controlled by condenser (process #631-466B) to RCRA incinerators	Not subject to K, Ka, or Kb; see note 1
EU0126	TC-01/02/03/03A	Organic Waste Tank (process #633-001); 5,000 gallon capacity; installed 1991; controlled by Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)	Not subject to K, Ka, or Kb; see note 1
EU0127	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003A); 200,000 gallon capacity; installed 1976/modified 1992; controlled by Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)	Not subject to K, Ka, or Kb; see note 1
EU0128	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003B); 90,000 gallon capacity; installed 1978/modified 1995; controlled by Seal Tank (process #631-006), followed by "D" Incinerator (process #633-000) and Oxidation tower (process #633-019) or Closed Flare (process #633-050) or Open Flare (process #631-012)	Not subject to K, Ka, or Kb; see note 1

Note 1: These tanks are subject to 40 CFR Part 63 Subpart MMM, and as such are required to comply only with the provisions of that MACT. [see 63.1360(i)(3)]

Maximum Available Control Technology (MACT) Applicability
40 CFR Part 63 Subpart MMM-National Emission Stnadards for Hazardous Air Pollutants for Pesticide Active Ingredient Production
Central Treatment Systems:

- North Waste Management Area
  This area receives, manages, and treats Group 1 wastewater streams and residuals from the IMI-1, IMI-2, PROWL, and Pyrrole/XXXXX/320I manufacturing facilities. There are eight wastewater tanks in this area. Each tank has a fixed roof and is equipped with a closed vent system as defined in 40 CFR §63.133(a)(1). Tank 633-001 (PR-39) is vented to the atmosphere. Controls are not required on this tank based on vessel capacity and the HAP vapor pressure. For the controlled tanks, the closed vent systems discharge to a common fume handling system. This system conveys the

tank emissions to at least one of three hazardous waste incinerators (A, B, or C) where they are destroyed in accordance with §63.133(a)(2)(i). These RCRA units are exempt from the provisions of §63.1366, §63.1367, and §63.1368 per §63.1362(l)(2).

- South Waste Management Area
  This area receives, manages, and treats Group 1 wastewater streams and residuals from the IMI-1, IMI-2, and THIMET/COUNTER manufacturing facilities. There are three wastewater tanks in this area. Each tank is equipped with a fixed roof and a closed vent system to route emissions via a seal tank to the D hazardous waste incinerator where they are destroyed in accordance with the requirements of §63.133(a)(1) and (a)(2)(i). If the D incinerator is not operating, the seal tank emissions are diverted automatically to the closed flare in this area. An open flare is also installed to backup the closed flare in the event the D incinerator and closed flare are not operating. This RCRA unit is exempt from the provisions of §63.1366, §63.1367, and §63.1368 per §63.1362(l)(2).

The applicability of this regulation is presented in the table below:

Table 21: Applicability of 40 CFR Part 63 Subpart MMM to the Central Treatment Systems

EU#	Point #	Unit Description	Explanation
NORTH AREA			
EU0116	PR-95/53/54/47	"A" Aqueous Waste Storage Tank (process #633-003)	Subject to MMM as a wastewater tank
EU0117	PR-95/53/54/47	"B" Aqueous Waste Storage Tank (process #633-203)	Subject to MMM as a wastewater tank
EU0118	PR-95/53/54/47	"C" Aqueous Waste Storage Tank (process #633-060)	Subject to MMM as a wastewater tank
EU0027	PY-13	Waste Storage Section 633: Pyrrole aqueous Waste Hold Tank (process #633-401)	Subject to MMM as a wastewater tank
EU0028	PY-13	Waste Storage Section 633: Pyrrole organic Waste Hold Tank (process #633-421)	Subject to MMM as a wastewater tank
EU0119	PR-39	Organic Waste Storage Tank (process #633-001)	Subject to MMM as a wastewater tank
EU0120	PR-95/53/54/47	"A" Waste Blend Tank (process #633-460A)	Subject to MMM as a wastewater tank
EU0121	PR-95/53/54/47	"B" Waste Blend Tank (process #633-460B)	Subject to MMM as a wastewater tank
EU0122	PR-47	"C" Incinerator (process #633-223); 89.8 MMBtu/hr; Installed 1990, Mfr: Trane Thermal; Natural Gas	Not Subject to MMM because Subject to EEE
EU0123	PR-53	"A" Incinerator (process #633-005A); 74 MMBtu/hr; Installed 1975, Mfr: John Zink; Natural gas	Not Subject to MMM because Subject to EEE
EU0124	PR-54	"B" Incinerator (process #633-005B); 74 MMBtu/hr; Installed 1975, Mfr: John Zink; Natural Gas	Not Subject to MMM because Subject to EEE
EU0125	PR-95	Incinerator Emergency bypass	Subject to the bypass recordkeeping provisions
SOUTH AREA			
EU0126	TC-01/02/03/03A	Organic Waste Tank (process #633-001)	Subject to MMM as a wastewater tank
EU0127	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003A)	Subject to MMM as a wastewater tank
EU0128	TC-01/02/03/03A	Aqueous Waste Tank (process #633-003B)	Subject to MMM as a wastewater tank
EU0129	TC-01	"D" Incinerator (process #633-000); 54 MMBtu/hr; Installed 1976, Mfr:Trane; Natural Gas	Not Subject to MMM because Subject to EEE
EU w/o	TC-02	Sulfite Oxidation Tower (process #633-019); treats effluent from the sulfur dioxide scrubbing system	No applicable requirements in MMM
EU w/o	TC-03	Closed Flare (process #633-050); backup for "D"	No applicable requirements in MMM
EU w/o	TC-03A	Open Flare (process #631-012); backup for closed flare	No applicable requirements in MMM

Note for TC-03 and TC-03A: While TC-03 will only combust fumes from process vents during an SSM event, the flare may be used as the primary control device for wastewater tanks during an incinerator outage (i.e., the Hannibal Plant may continue to feed waste to the wastewater tanks when the incinerator is shut down). During an outage, the enclosed flare

operates as a control device meeting the requirements for Group 1 wastewater tanks [i.e., flare complies with requirements of 40 CFR 63.11(b)].

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability
Subpart EEE—National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors
The hazardous waste combustor NESHAP standards include 99.99% DRE and specific limits for the following emission parameters measured at the stack and corrected to 7% oxygen (02):

- Dioxin and Furan emissions,
- Mercury emissions,
- Particulate matter[2],
- HCL and chlorine emissions,
- Carbon monoxide emissions,
- Hydrocarbon emissions,
- Semi-volatile metal emissions (e.g., cadmium and lead), and
- Low volatile metal emissions (e.g., arsenic, beryllium, and chromium).

Evaluation of the hazardous waste combustion units capabilities to meet the hazardous waste combustor NESHAP standards are as follows:

Dioxin & Furans
All of the hazardous waste combustion units are rapid quench units. Rapid quenching in the combustion systems reduces the temperature of the combustion gas from greater than 1800º F to less than 200º F in less than two seconds, minimizing conditions favorable for the formation of dioxin and furans out the stack. This has been substantiated with stack testing for dioxins and furans where measured emissions were significantly less than the MACT standard of 0.4 ng toxic equivalents (TEQ)/dscm corrected to 7% O_2.

Particulate Matter
Previous stack sampling PM results (0.03 - 0.06 gr / dscf) indicate that the Hannibal Plant hazardous waste combustion units can achieve particulate matter emissions less than the Alternative Particulate Matter standard of 0.08 gr/dscf.

Hydrochloric Acid (HCl) and Chlorine (Cl_2)
Previous stack sampling results indicate that the emissions from the Hannibal Plants hazardous waste combustion units are significantly less than the 32 ppm HCl/Cl2 emission standard.

Mercury
The Hannibal Plant's waste feeds to its hazardous waste combustion units typically have no detectable concentrations of mercury; and if detected, MTEC calculations show that emission from the Hannibal Plants hazardous wasted combustion units are significantly below the 130 ug/dscm mercury emission standard.

[2] The Hannibal Plant will be using the Alternate PM standard given in the April 18, 2000 correspondence from EPA to American Cyanamid in-lieu-of the alternate PM standard which appeared in the final rule identified at 40 CFR 63.1206(b)(14).

Semi-volatile and Low volatile metals (SVM and LVM)
Stack gas sampling of the Hannibal Plant hazardous waste combustion units indicate that concentrations of expanded list SVM's (lead, cadmium and selenium) and expanded list LVM's (antimony, cobalt, manganese, nickel, beryllium, arsenic, and chromium) meet the alternative metals emission standard limits of 230 ug/dscm for SVM's and 92 ug/dscm for LVM's.

Carbon Monoxide (CO) and Total Hydrocarbon (THC)
The Hannibal Plant is in compliance with the CO and/or THC Limits established in the MACT standard. This evaluation is based on THC measurements during Comprehensive Performance Tests and routine continuous emission monitoring for CO data collection activities.

Performance Testing

A, B, C, and D Incinerators
During RCRA Trial Burn performance tests for these units, each of these units exceeded the following requirements:

- 99.99% destruction removal efficiency;
- 99% system removal efficiency for hydrochloric acid (HCl) corrected to 7% O_2; and
- Less than 0.08 gr/dscf for particulate matter corrected to 7% O_2.

A complete RCRA hazardous waste incinerator performance test on the "B" (PR-54) incinerator was performed in May and August 1989. The testing was performed by Midwest Research Institute. This testing demonstrated compliance with MDNR APCP regulations included in the construction permit for these incinerators. The testing also included demonstration of compliance with RCRA particulate emission regulations as well as other applicable RCRA regulations (destruction removal efficiency, hydrochloric acid (HCl) removal efficiency). Because the "A" (PR-53) and "B" incinerators are basically identical units, the MDNR and EPA approved the testing on the "B" unit as also satisfying the testing requirement for the "A" unit.

A preliminary RCRA hazardous waste incinerator performance test was performed on the "C" (PR-47) incinerator during May 1993. The testing was performed by Midwest Research Institute. This testing demonstrated the "C" incinerator can comply with MDNR APCP regulations for particulate emissions identified in the construction permit for the incinerator under maximum particulate loading to the incineration system. The testing also demonstrated the ability to comply with RCRA particulate emission regulations, as well as other applicable RCRA regulations, such as destruction removal efficiency and hydrochloric acid removal efficiency.

A performance test on the "D" incinerator was completed by Ryckman, Edgerly, Tomlinson, and Associates in November 1977. This test was approved by the MDNR APCP. This test demonstrated compliance with applicable emission limits for particulate matter and sulfur-related emissions. A complete RCRA hazardous waste incinerator performance test on the "D" incinerator was performed in May and August 1989. This testing demonstrated compliance with APCP and RCRA particulate emission regulations as well as other applicable RCRA regulations, such as destruction removal efficiency and hydrochloric acid removal efficiency. This test was approved by the MDNR and EPA.

Other Regulatory Requirements

In its operating permit application, the installation proposed to eliminate the flare used for VOC controls on the "A" Aqueous Waste Storage Tank 633-003 (PR-44) from consideration as a permitted control device, and stated that the plant would continue operating the flare on a voluntary basis. While the flare is not required for compliance with emissions standards, this emissions system was part of the original permit application, and was relied upon in the review of the proposed equipment. The flare referenced in this paragraph was removed in 2003. However, the fumes from the "A" Aqueous Waste Storage Tank 633-003 are routed to either the A, B, or C incinerator Since these incinerators have a greater destruction efficiency than the flare, no permitting action was required for this change.

TC-02 Sulfite Oxidation Tower (process #633-019)

The aqueous effluent (a salt solution) from the packed tower on the "D" Incinerator is treated with air in a countercurrent manner in the oxidation tower. This is done to oxidize sodium sulfite to sodium sulfate in the aqueous phase. There are no regulations that apply to this operation, therefore it is listed as an emission unit without limitations.

Flares

TC-03 and TC-03A are emergency backup flares for the "D" Incinerator. Fumes from process vents only pass through the flares during an SSM event involving the fume incinerator, but the enclosed flare will be used for fume abatement from the wastewater tanks during an incinerator outage. During an outage, the enclosed flare operates as a control device meeting the requirements for Group 1 wastewater tanks [i.e., flare complies with requirements of 40 CFR 63.11(b)].

"C" Incinerator and Waste Tank

These facilities were constructed under conditions for a deminimis permit. Compliance with requirements of deminimis construction permit regulations limits emissions of volatile organic compounds (VOC) to less than 40 tons per year for facilities constructed under this permit. By copy of this operating permit application, BASF Agri Chemicals - Hannibal Plant commits to complying with the deminimis permit regulations by maintaining emissions from the "C" incinerator and waste tank (633-203) below 40 tons per year volatile organic chemical emissions. There were no separate VOC emission limits established in the construction permit for these facilities. BASF Agri Chemicals - Hannibal Plant will demonstrate compliance with the VOC emission levels included in this application based on engineering calculation of emissions from tank throughput information and historical performance testing data and throughput information on the "C" incinerator. This type of permit modification that is requested cannot be granted through either the operating permit program or the New Source Review (NSR) program.

State Regulations

There are no emission unit specific state regulations that apply to the units in the Central Treatment System. All pollutants that would be controlled by state regulations are more stringently controlled by the federal regulations applied in this operating permit.

Crop Protection Products (CPC) Plant

The CPC facility produces formulated products of pesticide active ingredients. The facility formulates a number of products that may include formulations of AVENGE®, BACKDRAFT®, BASAGRAN®, EXTREME®, PROWL®, and PURSUIT®, as well as additional products.

The truck loading process for the CPC Plant consists of bulk loading of a variety of liquid finished herbicide products into bulk tank trucks for shipment to distribution centers or customers. The process contains three filling systems for loading finished herbicide products into various size containers. The Lindy filler has been removed . The drum filler is a system for filling 55-gallon drums of PROWL® herbicide. The Serac (process #180-108) and Mini Bulk (process #210-008) fillers are container filling systems (typically 2½ , 30, 55 and 110 gallons) for the finished herbicide products produced at this installation.

Construction Permit History

All air permitting actions are discussed below in chronological order. The description is presented as it was at the time of permitting. Any changes to the regulatory determinations made in these permits are addressed elsewhere in this document.

1. Construction Permit 0489-004A

   This construction permit was issued March 27, 1989, to authorize constructed of a new bulk herbicide blending and product storage facility. The permittee will add additional bulk storage tanks, twelve organic liquid storage tanks, herbicide blending equipment and equipment to package it in bulk for sale.

   The bulk herbicide blending will occur in building additions attached to both the SCEPTER® and PROWL® buildings. The input materials will consist of various amounts of the following: SCEPTER®, PROWL®, PURSUIT®, water, acetic acid, aqueous ammonia, MCB, MC-60, or antifoam. Tank washouts between production cycles are sent to the existing waste treatment/incineration system. Vent condensers (61 to 65% control) are used to control emissions from the various mixing tanks. Dust collection systems associated with the SCEPTER®, PURSUIT®, and IGEPON® production (98 to 99.6% control) are used to control the particulate emissions from these new operations.

   The potential emissions of this project are less than the de minimis levels in 10 CSR 10-6.060. This permit does not contain any special conditions, nor does it apply any federal regulations.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

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.

This regulation applies to each storage vessel for volatile organic liquid storage which has a storage capacity greater than or equal to 75 m^3 (19,812.9 gallons). According to the definitions in the rule, a process tank is not a storage vessel [see 60.111b]

On October 15, 2003 the applicability section of this subpart was modified so that this subpart no longer applies to tanks with capacities of less than 75m^3. This amendment also exempted process tanks from this rule.

Table 22: Applicability of 40 CFR Part 60 Subparts K, Ka, and Kb to the CPC Production Facility

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
w/o	CPC-01	Active Ingredient Storage Tank (process #110-113); 30,400 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
EU0130	CPC-02	Solvent Storage Tank (process #110-023); 158,300 gallon capacity; Installed 1975-76	Subject to K, see note 6.
w/o	CPC-03	Solvent Storage Tank (process #110-131); 30,500 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
w/o	CPC-04	Emulsifier Storage Tank (process #110-117); 30,400 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
w/o	CPC-05	Active Ingredient Storage Tank (process #110-125); 51,900 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
EU0131	CPC-06	Organic Premix Tank (process #180-118); 17,100 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
EU0132	CPC-07	Product Storage Tank (process #180-109); 1,713,000 gallon capacity; Installed 1975-76	Not subject to K, Ka, or Kb, see note 2.
w/o	CPC-08	Emulsifier Storage Tank (process #110-029); 24,200 gallon capacity; Installed 1975-76	Not subject to K, Ka, or Kb, see note 1.
w/o	CPC-09	Emulsifier Storage Tank (process #110-032); 24,200 gallon capacity; Installed 1975-76	Not subject to K, Ka, or Kb, see note 1.
EU0133	CPC-10	Active Ingredient Storage Tank (process #180-001); 49,500 gallon capacity; Installed 1975-76	Not subject to K, Ka, or Kb, see note 2.
EU0134	CPC-11	Product Storage Tank (process #180-112); 103,000 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
EU0135	CPC-12	Formulator C (process #180-122) Process Vessel	Not subject to K, Ka, or Kb, see note 3.
EU0136	CPC-13	Product Holding Tank (process #180-126) Process Vessel	Not subject to K, Ka, or Kb, see note 3.
w/o	CPC-14	Product Storage Tank (process #110-101); 51,300 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 2.
w/o	CPC-15	Product Storage Tank (process #110-105); 25,100 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
w/o	CPC-16	Product Storage Tank (process #110-109); 52,500 gallon capacity; Installed 1989	Not subject to K, Ka, or Kb, see note 1.
w/o	CPC-17	Filter Drain Drum (process #180-139) - Salvage Drum, 55 gallon	Not subject to K, Ka, or Kb, see note 4.
EU0137	CPC-18	Loading for Bulk Trucks	Not subject to K, Ka, or Kb, see note 4.
EU0138	CPC-19	Formulator A (process #180-003A) Process Vessel	Not subject to K, Ka, or Kb, see note 3.

Table 22 con't

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
EU0139	CPC-20	Formulator B (process #180-003B) Process Vessel	Not subject to K, Ka, or Kb, see note 3.
EU0140	CPC-21	Hold Tank (process #180-006) Process Vessel	Not subject to K, Ka, or Kb, see note 3.
EU0141	CPC-21	Delivery Tank (process #180-044) Process Vessel	Not subject to K, Ka, or Kb, see note 3.
EU0142	CPC-24	Drum Filler (process #180-010) Vents through EP-CPC-32	Not subject to K, Ka, or Kb, see note 4.
w/o	CPC-29	Filler (Serac) (process #180-108)	Not subject to K, Ka, or Kb, see note 4.
w/o	CPC-29	Filler (Mini Bulk) (process #210-008)	Not subject to K, Ka, or Kb, see note 4.
w/o	CPC-30	Aqueous Waste (process # 633-007) - Process Vessel	Not subject to K, Ka, or Kb, see note 3.
w/o	CPC-31	Fragrance Storage Tank (process #180-050); 7,200 gallon capacity; Installed 1998	Not subject to K, Ka, or Kb, see note 1.
w/o	CPC-32	Blend Tank (process #180-040) - Process Vessel, 2,900 gallon capacity	Not subject to K, Ka, or Kb, see note 3.
w/o	CPC-32	Process Equipment, Drum Filler for 55 Gal Drums, (process #180-010)	Not subject to K, Ka, or Kb, see note 4.
w/o	CPC-33	Product Storage Tank (process #110-136A)	Not subject to K, Ka, or Kb, see note 5.
w/o	CPC-34	Product Storage Tank (process #110-136B)	Not subject to K, Ka, or Kb, see note 5.
w/o	CPC-35	Product Storage Tank (process #110-136C)	Not subject to K, Ka, or Kb, see note 5.

Note 1: The tank does not meet the size and/or vapor requirements of the rule.
Note 2: The contents of the tank do not meet either the definition of petroleum liquid or volatile organic liquid.
Note 3: Process tanks are exempt from the definition of storage vessel.
Note 4: These operations are not covered by this rule and/or do not meet the definition of storage vessel.
Note 5: These tanks have been removed from service.
Note 6: EU0130 is subject to the provisions of K. However, there are no applicable requirements as the liquid in the tank has a total vapor pressure less than 78 mmHg.

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63 Subpart MMM-National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

This regulation does not apply to this production plant, as this is not a pesticide active ingredient production facility.

40 CFR Part 63 Subpart FFFF-National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufaturing

This regulation applies to miscellaneous organic chemical manufacturing process units (MCPU). An MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in §63.2550, that satisfies all of the conditions specified in paragraphs §63.2435(b)(1) through (3).

In the Initial Notification submitted March 10, 2004, BASF indicated that this regulation applies to the CPC and IMI-1 Formulation areas. However, in the Notification of Compliance submitted September 2008, BASF stated that this regulation does not apply to the IMI-1 Formulation area because no organic HAPs are used in any of the surfactants currently used in the premix formulations. When the Initial Notification was submitted, organic HAPs were used in the IMI-1 facility, but that practice has been discontinued.

The CPC facility produces formulated products of pesticide active ingredients, using both continuous and batch process steps. The facility formulates a number of products that may include formulations of AVENGE®, BACKDRAFT®, BASAGRAN®, EXTREME®, PROWL®, PURSUIT®, and Prowl ® H_2O Herbicide as well as additional products. All units that are subject to this regulation are existing units.

HAPs found in this process include:

CAS No.	Substance
000101-68-8	XXXX
000107-06-2	1,2 Dichloroethane
000091-20-3	Naphthalene

The XXXX is the HAP component (up to 35%) of the XXXX The other isocyanate components are VOCs. Naphthalene is the HAP component (up to 14%) of a high flash point, high boiling solvent (AR200) used in some formulations in CPP. 1,2-Dichloroethane is present in the pesticide active ingredient at very low levels (<0.05%).

The process emissions are either vented directly to the atmosphere, due to low levels not requiring control, or are treated using vent condensers before discharge. The vent condensers are not required for compliance with this regulation, but are required for other reasons, as explained in “Other Regulatory Determinations-Required Control Devices”. Organic HAPs are present in one of the current pesticide active ingredients and in one of the solvents presently used in the product formulations. The process vents are designated as “Group 2 batch process vents”. The storage tanks meet the definition of “Group 2 Storage Tanks”.

The applicability of this regulation to the CPC facility is detailed in Table 23.

Table 23: Applicability of 40 CFR Part 63 Subpart FFFF to the CPC Production Facility

EU#	Point #	Unit Description	Explanation
w/o	CPC-01	Active Ingredient Storage Tank (process #110-113); 30,400 gallon capacity; Installed 1989	Not Subject to FFFF
EU0130	CPC-02	Solvent Storage Tank (process #110-023); 158,300 gallon capacity; Installed 1975-76	Subject to FFFF as a Group 2 Storage Tank
w/o	CPC-03	Solvent Storage Tank (process #110-131); 30,500 gallon capacity; Installed 1989	Not Subject to FFFF
w/o	CPC-04	Emulsifier Storage Tank (process #110-117); 30,400 gallon capacity; Installed 1989	Not Subject to FFFF
w/o	CPC-05	Active Ingredient Storage Tank (process #110-125); 51,900 gallon capacity; Installed 1989	Not Subject to FFFF
EU0131	CPC-06	Organic Premix Tank (process #180-118); 17,100 gallon capacity; Installed 1989	Subject to FFFF as a Group 2 Storage Tank
EU0132	CPC-07	Product Storage Tank (process #180-109); 1,713,000 gallon capacity; Installed 1975-76	Subject to FFFF as a Group 2 Storage Tank
w/o	CPC-08	Emulsifier Storage Tank (process #110-029); 24,200 gallon capacity; Installed 1975-76	Not Subject to FFFF
w/o	CPC-09	Emulsifier Storage Tank (process #110-032); 24,200 gallon capacity; Installed 1975-76	Not Subject to FFFF
EU0133	CPC-10	Active Ingredient Storage Tank (process #180-001); 49,500 gallon capacity; Installed 1975-76	Subject to FFFF as a Group 2 Storage Tank
EU0134	CPC-11	Product Storage Tank (process #180-112); 103,000 gallon capacity; Installed 1989	Subject to FFFF as a Group 2 Storage Tank
EU0135	CPC-12	Formulator C (process #180-122) Process Vessel	Subject to FFFF as a Group 2 Batch Process Vent
EU0136	CPC-13	Product Holding Tank (process #180-126) Process Vessel	Subject to FFFF as a Group 2 Batch Process Vent
w/o	CPC-14	Product Storage Tank (process #110-101); 51,300 gallon capacity; Installed 1989	Not Subject to FFFF
w/o	CPC-15	Product Storage Tank (process #110-105); 25,100 gallon capacity; Installed 1989	Not Subject to FFFF
w/o	CPC-16	Product Storage Tank (process #110-109); 52,500 gallon capacity; Installed 1989	Not Subject to FFFF

Table 23: continued

EU#	Point #	Unit Description	Explanation
w/o	CPC-17	Filter Drain Drum (process #180-139) - Salvage Drum, 55 gallon	Not Subject to FFFF
EU0137	CPC-18	Loading for Bulk Trucks	Subject to FFFF as a Group 2 Transfer Rack
EU0138	CPC-19	Formulator A (process #180-003A) Process Vessel	Subject to FFFF as a Group 2 Batch Process Vent
EU0139	CPC-20	Formulator B (process #180-003B) Process Vessel	Subject to FFFF as a Group 2 Batch Process Vent
EU0140	CPC-21	Hold Tank (process #180-006) Process Vessel	Subject to FFFF as a Group 2 Batch Process Vent
EU0141	CPC-21	Delivery Tank (process #180-044) Process Vessel	Subject to FFFF as a Group 2 Batch Process Vent
EU0142	CPC-24	Drum Filler (process #180-010) Vents through EP-CPC-32	Subject to FFFF as a Group 2 Batch Process Vent
w/o	CPC-29	Filler (Serac) (process #180-108)	Not Subject to FFFF
w/o	CPC-29	Filler (Mini Bulk) (process #210-008)	Not Subject to FFFF
w/o	CPC-30	Aqueous Waste (process # 633-007) - Process Vessel	Not Subject to FFFF
w/o	CPC-31	Fragrance Storage Tank (process #180-050); 7,200 gallon capacity; Installed 1998	Not Subject to FFFF
w/o	CPC-32	Blend Tank (process #180-040) - Process Vessel, 2,900 gallon capacity	Not Subject to FFFF
w/o	CPC-32	Process Equipment, Drum Filler for 55 Gal Drums, (process #180-010)	Not Subject to FFFF
w/o	CPC-33	Product Storage Tank (process #110-136A)	No - Removed from service
w/o	CPC-34	Product Storage Tank (process #110-136B)	No - Removed from service
w/o	CPC-35	Product Storage Tank (process #110-136C)	No - Removed from service

Note for CPC-18: §63.2475 and Subpart FFFF Table 5 contain the requirements for transfer racks. These requirements do not apply to Group 2 transfer racks.
Note for CPC-33 through CPC-35: These 3 tanks were temporarily used for PROWL H2O Formulated Product storage & testing, however, they are currently removed from service.

Initial Compliance (§63.2455 through §63.2485, as applicable):

Emissions calculations for the storage tanks and formulations vessels handling the formulation solvent AR200 were performed using AP-42 and other engineering calculations. The emissions calculated for the combined breathing and working losses and formulations' vessel emissions of naphthalene were very low (0.04 tons per year). The storage tanks and formulations vessels meet the definition of "Group 2 Storage Tanks" and "Group Batch Process Vents" respectively.

Emissions calculations for the isocyanate storage tank were performed according to AP-42 methodology. The emissions calculated for the combined breathing and working losses of XXXX were extremely low (0.01 tons per year). This storage tank is a "Group 2 Storage Tank" and does not require an emissions control device.

Continuous Compliance (§63.1039(a)(1)(iii)):

XXXX and naphthalene are classified as heavy liquids (HL) under LDAR and equipment handling this compound does not require active component monitoring by Method 21. Monitoring is provided by olfactory, visual, or auditory means.

The pesticide active ingredient contains a small amount (<0.05%) of 1,2 Dichloroethane . This is below de minimis levels for LDAR.

The requirements of §63.1025 and §63.1026 do not apply, because the organic HAPs are heavy liquids under LDAR.

Other Regulatory Determinations

Required Control Devices

In its operating permit application, the installation proposed to eliminate the vent condensers from consideration as permitted control devices, and stated that the plant would continue operating these condensers on a voluntary basis. While the vent condensers are not required for compliance with emissions standards, these emissions systems were a part of the original permit applications, and were relied upon in the review of the proposed equipment. The permittee shall not remove or discontinue the use of the control devices once operation of the control devices has begun. To do so would be considered a "modification" under the state rules, and would require that the permittee obtain a construction permit prior to the discontinuance.

Utilities and Services Departments

Utilities Department

The Utilities Department at the installation consists of the Northeast Power with coal and ash handling systems, East Utilities Boilers, Water Treatment Lime Handling, Nitrogen Plant, and Cooling Towers.

The ash handling system at the Northeast Power utility boilers consists of a collection and transfer system for managing bottom ash from two coal-fired boilers and fly ash from the electrostatic precipitators for these units. Emissions from the ash handling system are managed with baghouses. The coal-fired boilers are each overfeed stoker boilers, each rated at 142 MMBTU/hr heat input, and were constructed in the 1950's..

Coal for Northeast Power Boiler #4 (UTIL-02) and Boiler #5 (UTIL-03) is transferred from the coal pile into storage bunkers inside the boiler building. The coal handling equipment for Boiler #4 and #5 consists of an inclined conveyor (50 tons/hr) which transfers to a vertical bucket elevator (50 tons/hr) which transfers to a horizontal conveyor (100 tons/hr) into the closed coal storage bunkers inside the boiler building. There is no coal processing equipment (e. g. crushing, classifiers, etc.) at the installation.

The East Utilities Boilers #1 and #2 (UTIL-07) can be fired on either No. 2 oil or natural gas. The sum of the maximum design firing rate of these boilers is 232.5 MMBTU/hr. The boilers were placed into

service in 1976 as oil-fired boilers, and were approved in a letter dated April 24, 1998 from MDNR, to modify the boilers such that the primary fuel supply would be natural gas instead of the previously permitted No. 6 fuel oil.

Services Department

The Services Department at the installation consists of the one (1) diesel storage tank, two (2) gasoline storage tanks and one (1) nitric acid storage tank.

Construction Permit History

All air permitting actions are discussed below in chronological order. The description is presented as it was at the time of permitting. Any changes to the regulatory determinations made in these permits are addressed elsewhere in this document.

1. No Permit Required Letter, PAMS 1998-04-062
   This letter details the change of primary fuel of 2 existing boilers from fuel oil #6 to natural gas. These boilers were originally permitted under CP0276-003, and are capable of burning either Fuel Oil #6 or natural gas. After modification, natural gas will be the primary fuel for these boilers, with Fuel Oil #2 as a backup fuel. The modification consists of installation of a gas line to the existing natural gas burners. No modifications are required for the boiler itself, as the natural gas burners are in place from the original construction. This project also includes replacement of the Fuel Oil #6 burners with a unit to burn Fuel Oil #2. Since this modification is not expected to cause an increase in emissions, no construction permit is required.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60, Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971

This subpart applies to each fossil-fuel-fired steam-generating unit of more than 73 megawatts (MW)heat input rate (250 MMBtu/hr). Northeast Power Boiler #4 (UTIL-02) and Boiler #5 (UTIL-03) were constructed in the 1950s, and each unit has a maximum design rate of 142 MMBtu/hr. Northeast Power Boiler #4 (UTIL-02) and Boiler #5 (UTIL-03) are less than 250 million BTU per hour. East Utilities Boilers #1 and #2 (UTIL-07) were originally put into service in 1976, modified in 1998. Each of these boilers have a maximum design rate of 232.5 MMBtu/hr. East Utilities Boilers #1 and #2 (UTIL-07) are less than 250 million BTU per hour. There are no steam generating units at the installation constructed after August 17, 1971 with heat an input greater than 250 MMBtu; therefore, this subpart does not apply to the installation.

40 CFR Part 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978

This subpart does not apply, as BASF is not an electric utility.

40 CFR Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to each steam generating unit that commences construction, modification or reconstruction after June 19, 1984 and that has a heat input capacity from fuels combusted in the

steam generating unit of greater than 29 MW (100 million BTU/hour). East Utilities Boilers #1 and #2 (UTIL-07) were originally put into service in 1976, modified in 1998. Each of these boilers have a maximum design rate of 232.5 MMBtu/hr. The 1998 modification consisted of a capital improvement to upgrade the boilers by changing the primary fuel from No. 6 fuel oil to natural gas with No. 2 fuel oil as a backup fuel supply. No physical modifications of the boilers were required to change the primary gas supply since the original equipment was capable of operating using No. 6 fuel oil, natural gas, or dual fuel supply. The modification did include the replacement of the existing No. 6 fuel oil burner with a unit to burn No. 2 fuel oil, connection of a gas line to the existing main gas burners, installation of related gas control valves, and upgrading of the control panel to provide modern computer control capabilities. The installation also upgraded the materials of construction for the existing burner assemblies to improve corrosion characteristics of the original carbon steel material to stainless steel. The switching of fuels from No.6 fuel oil to natural gas and No. 2 fuel oil demonstrated a reduction in SOx, NOx and particulate matter (PM_{10}) which are the regulated pollutants under Subpart Db.

§60.2 defines “modification” as any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. Since the switching of fuels is a decrease in regulated pollutants it does not meet the definition of “modification” as defined in §60.2. Therefore, the East Utilities Boilers #1 and #2 (UTIL-07) boilers are not subject to this standard.

40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 million BTU/hr). Northeast Power Boiler #4 (UTIL-02) and Boiler #5 (UTIL-03) were constructed in 1980; therefore are not subject to this standard. East Utilities Boilers #1 and #2 (UTIL-07) were originally put into service in 1976, modified in 1998. The 1998 modification does not meet the definition of modification”, as discussed above; therefore this subpart does not apply to the installation.

40 CFR Part 60 Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

40 CFR Part 60 Subpart Ka-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984

This regulation applies to each storage vessel for petroleum liquids which has a storage capacity greater than 40,000 gallons.

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.

This regulation applies to each storage vessel for volatile organic liquid storage which has a storage capacity greater than or equal to 75 m^3 (19,812.9 gallons). According to the definitions in the rule, a process tank is not a storage vessel [see 60.111b]

On October 15, 2003 the applicability section of this subpart was modified so that this subpart no longer applies to tanks with capacities of less than 75m^3. This amendment also exempted process tanks from this rule.

Table 24: Applicability of 40 CFR Part 60 Subparts K, Ka, and Kb to the Services and Utilities Plant

EU#	Point #	Unit Description	Subject to K, Ka, or Kb?
Services			
w/o	SV-01	Nitric Acid Storage Tank (process #004-572); 287 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	SV-02	Diesel Fuel Storage Tank D-1; 1,000 gallon capacity; installed 1989	Not subject to K, Ka, or Kb; see note 1
w/o	SV-03	Unleaded Gasoline Storage Tank G-1; 1,000 gallon capacity; installed 1989	Not subject to K, Ka, or Kb; see note 1
w/o	SV-04	Unleaded Gasoline Storage Tank G-2; 1,000 gallon capacity; installed 1989	Not subject to K, Ka, or Kb; see note 1
Utilities			
w/o	UTIL-17	Sulfuric Acid Storage Tank	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-25	Optimeen Tote tank, 300 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-26	BETZ 5474 Boiler Feed Treatment Mixture Storage	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-30	BETZ 26K Corrosion Inhibitor	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-38	BETZ 26K Corrosion Inhibitor	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-39	BETZ 5474 Boiler Feed Treatment Mixture Storage	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-40	Sulfuric Acid Storage Tank	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-45	Fuel Oil #2 Storage Tank, 700 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-55	BETZ 2191 Sludge Treatment Polymer Storage Tank, 1,000 gallon capacity	Not subject to K, Ka, or Kb; see note 1
w/o	UTIL-06	#6 Fuel Oil Storage Tank, 50,000 gallon capacity; installed 1976	Not subject to K, Ka, or Kb; see note 2
w/o	UTIL-06	#6 Fuel Oil Storage Tank, 66,000 gallon capacity, installed 1976	Not subject to K, Ka, or Kb; see note 2
w/o	UTIL-09	Lime/Water Slurry Storage Tank, 600 gallon capacity, installed 1975-76	Not subject to K, Ka, or Kb; see note 1

Note 1: The unit does not meet the size and or contents requirements of the rule.
Note 2: The unit does not meet the date requirements of the rule.

40 CFR Part 60 Subpart Y-Standards of Performance for Coal Preparation and Processing Plants

This regulation applies to facilities which prepare coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying. BASF does not perform these operations on the coal used at this plant. Therefore, this regulation does not apply.

40 CFR Part 63 Subpart Q-National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

The provisions of this subpart apply to all new and existing industrial process cooling towers that have ever been operated with chromium-based water treatment chemicals and are located at major sources. This regulation prohibits the use of chromium based water treatment chemicals, effective as of the compliance date. The regulation allows for residual chromium to exist in the tanks. BASF discontinued the use of chromium based water treatment chemicals more than 10 years ago. This rule is included in the Operating Permit to allow for residual chromium that may exist from the treatments used prior to the compliance date.

40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

On July 30, 2007, the United States Court of Appeals, District of Columbia Circuit officially ordered a full vacatur of the Boiler MACT rule. The vacatur has the same effect as if a federal Boiler MACT rule was never promulgated. This means there is no longer a September 13, 2007 compliance date for sources affected by this HAP source category. We are awaiting written guidance from EPA on how to handle sources formerly subject to the Boiler MACT. If there is a new MACT promulgated and the units at this installation are subject with requirements a major modification will be required to update this operating permit.

Other Regulatory Requirements

10 CSR 10-3.060, Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating

Compliance calculations and monitoring requirements are detailed in the following Tables:

Table 25: Calculation of Q for 10 CSR 10-3.060

Emission Unit #	Emission Point #	Unit Description	Heat Input (Q) (MMBTU/hr)	new/existing	Fuel Type
EU0112	PR-52	SAR Combustion Air Preheater (process #220-X41)	16.2	new	Natural Gas
EU0144	UTIL-02	NEP Coal Fired Boiler #4	142	existing	coal
EU0145	UTIL-03	NEP Coal Fired Boiler #5	142	existing	coal
EU0149	UTIL-07	East Utilities Boiler #1	232.5	new	Natural Gas
EU0150	UTIL-07	East Utilities Boiler #2	232.5	new	Natural Gas
Total Q (MMBTU/hr) existing=			284		
Total Q (MMBTU/hr) new=			481.2		

The compliance calculations are shown in Table 26.

Table 26: Compliance Demonstration and Monitoring requirements for equipment subject to 10 CSR 10-3.060

Emission Unit #	Heat Capacity (MMBTU/hr)	MHDR (MMCF/hr or tons/hr)	PM Emission Factor (lb/MMCF or lb/ton)	PTE (lb/MMBTU) uncontrolled	PTE (lb/MMBTU) controlled	E (lb/MM BTU)	notes
EU0112	16.2	0.0162	7.6	0.01	no controls	0.16	no controls or monitoring required
EU0144	142	6.43	16	0.72	0.02	0.34	monitoring of ESP is required
EU0145	142	6.43	16	0.72	0.02	0.34	monitoring of ESP is required
EU0149	232.5	0.2325	7.6	0.01	no controls	0.16	no controls or monitoring required
EU0150	232.5	0.2325	7.6	0.01	no controls	0.16	no controls or monitoring required

10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds
All units that are fired by natural gas are exempt from this regulation, per 10 CSR 10-6.260(1)(A)2.

Table 27: Compliance Demonstration for 10 CSR 10-6.260

Emission Unit #	Emission Point #	Unit Description	Fuel Type	Heat content of fuel	Units	SO2 Emission Factor	units	Potential Emission rate (lb SO2 /MMBTU)
EU0144	UTIL-02	NEP Coal Fired Boiler #4	bituminous coal	22	MMBTU/ton coal	137.18	lb SO2/ton coal	6.24
EU0145	UTIL-03	NEP Coal Fired Boiler #5	bituminous coal	22	MMBTU/ton coal	137.18	lb SO2/ton coal	6.24

All units are in compliance with the emissions limitation of 8 $\frac{lbs\ SO_2}{MMBTU}$. Continued compliance requires that the sulfur content of the fuel does not exceed 4.63%.

10 CSR 10-6.400, Restriction of Emission of Particulate Matter From Industrial Processes
Exemptions: This rule exempts fugitive sources (6.400(1)(A)7., as well as units that have potential emissions less than 0.5 lb PM/hr (6.400(1)(A)(12). These exemptions exclude all units from the rule except the Lime Storage Bin. Exemption 6.400(1)(A)15. does not apply because there is no federally enforceable condition requiring the use of the baghouse on the Lime Storage Bin, therefore the unit is subject to this rule. Compliance is shown in the table below:

Table 28: Compliance Demonstration for 10 CSR 10-6.400

Emission Unit #	Emission Point #	Unit Description	MHDR (ton/hr)	PM Emission Factor (lb/ton)	Control Device	Capture Eff (%)	Control Eff (%)	PM PTE (lb/hr, uncontrolled)	PM PTE (lb/hr, controlled)	Limit (lb/hr)
EU0151	UTIL-08	Lime Storage Bin	20	2.2	baghouse	1.00	0.98	44.00	0.88	30.51

Since the baghouse is necessary to demonstrate compliance with the rule, monitoring provisions have been included in the permit condition.

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).

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