



LANE REGIONAL AIR PROTECTION AGENCY
1010 Main Street, Springfield, Oregon 97477
(541) 736-1056

STANDARD AIR CONTAMINANT DISCHARGE PERMIT
STANDARD ACDP

Issued in accordance with provisions of title 37, Lane Regional Air Protection Agency's Rules and Regulations, and based on the land use compatibility findings included in the permit record.

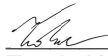
Issued To:
Arclin USA, LLC
475 North 28th Street
Springfield, Oregon 97477

Information Relied Upon:
Application Number: 73262
Date: April 27th, 2026

Facility Location:
Arclin USA, LLC
475 North 28th Street
Springfield, Oregon 97477

Land Use Compatibility Statement:
From: City of Springfield
Date: June 20th, 2000

Permit Number: 201221
Permit Type: Standard
Primary SIC: 2821 – Synthetic Resin Mfg.
Secondary SIC: 2869 – Organic Chemical Mfg.
Issuance Date: December 6th, 2023
Expiration Date: December 6th, 2028
Modification Date: June 29, 2026



Travis Knudsen, Executive Director

June 29, 2026

Effective Date

Source(s) Permitted to Discharge Air Contaminants (LRAPA 37-8010):

Table 1 Code	Source Description
Part B.51	Organic or inorganic chemical manufacturing and distribution.
Part B.70	Synthetic resin manufacturing.
Part C.3	All sources electing to maintain the source's netting basis.

Addendum NO. 1
Non-NSR/PSD Simple Technical Permit Modification

In accordance with subparagraph 37-0066(4)(b)(A) of LRAPA's Rules and Regulations, the following changes have been made to the Standard Air Contaminant Discharge Permit (ACDP) No. 201221: The emission factors for emission units SF-1: Group 1 Resin Manufacturing and SF-3: Group 3 Formaldehyde Manufacturing have been updated to incorporate emissions data from the facility's 2024 source test and to reflect the removal of two (2) resin drying ovens previously included in emission unit SF-1. The emission factors for FUG-1 have been updated to reflect updated component counts and to correct a

minor calculation error made during the previous permit renewal. Only the amended conditions have been included in this addendum, and all changes are in **bold**.

- 5.d. The permittee must use the emission factors in the table below in the equation in Condition 5.a for calculating the 12-month rolling emissions to demonstrate compliance with the PSELs.
 [LRAPA 34-016]

Emissions Unit(s)	Pollutant	Fuels/Species/ Conditions		Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
						Yes/No	Test Method
EU: SF-1 Group 1 (RTO)	HCHO	SF-1 On-line	RTO On-line	1.24	lb/hr	Within 6 months of SF-1 restart	EPA Method 323 or Method 320
			RTO Off-line	2.00	lb/hr		
		SF-1 Off-line	RTO On-line	0.17	lb/hr	Yes	
			RTO Off-line	5.73	lb/hr		
	MeOH	SF-1 On-line	RTO On-line	1.50	lb/hr	Within 6 months of SF-1 restart	EPA Method 18 or Method 308
			RTO Off-line	12.82	lb/hr		
		SF-1 Off-line	RTO On-line	0.03	lb/hr	Yes	
			RTO Off-line	0.65	lb/hr		
	Phenol	SF-1 On-line	RTO On-line	0.04	lb/hr	Within 6 months of SF-1 restart	EPA Method 18
			RTO Off-line	0.14	lb/hr		
		SF-1 Off-line	RTO On-line	0.02	lb/hr	Yes	
			RTO Off-line	0.11	lb/hr		
	DME	SF-1 On-line	RTO On-line	0.69	lb/hr	Within 6 months of SF-1 restart	EPA Method 18
			RTO Off-line	17.80	lb/hr		
		SF-1 Off-line	RTO On-line	0.02	lb/hr	Yes	
			RTO Off-line	0.06	lb/hr		
	CO	SF-1 On-line	RTO On-line	5.98	lb/hr	Within 6 months of SF-1 restart	EPA Method 10
			RTO Off-line	115.8	lb/hr		
		SF-1 Off-line	RTO On-line	0.04	lb/hr	Yes	
			RTO Off-line	0.09	lb/hr		
	VOC	SF-1 On-line	RTO On-line	0.62	lb/hr	Within 6 months of SF-1 restart	EPA Method 25A
			RTO Off-line	15.40	lb/hr		
		SF-1 Off-line	RTO On-line	0.20	lb/hr	Yes	
			RTO Off-line	5.27	lb/hr		
	NO _x	RTO Firing Natural Gas		0.19	lb/hr	No	NA

Emissions Unit(s)	Pollutant	Fuels/Species/ Conditions		Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
						Yes/No	Test Method
EU: SF-2 (TGB)	HCHO	SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 323 or Method 320
			TGB Off-line	1.36	lb/hr		
	MeOH	SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 18 or Method 308
			TGB Off-line	46.5	lb/hr		
	DME	SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 18
			TGB Off-line	1.44	lb/hr		
	CO	SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 10
			TGB Off-line	18.05	lb/hr		
EU: SF-3 (CI)	VOC	SF-2 On-line	TGB On-line	0.07	lb/hr	Within 6 months of SF-2 restart	EPA Method 25A
			TGB Off-line	70.2	lb/hr		
	NO _x	TGB Firing Natural Gas		4.87E-02	lb/MMBtu	No	NA
	HCHO	SF-3 On-line	CI On-line	0.12	lb/hr	Yes	EPA Method 323 or Method 320
	MeOH	SF-3 On-line	CI On-line	0.17	lb/hr	Yes	EPA Method 18 or Method 308
	DME	SF-3 On-line	CI On-line	0.33	lb/hr	Yes	EPA Method 18
	CO	SF-3 On-line	CI On-line	0.83	lb/hr	Yes	EPA Method 10
	VOC	SF-3 On-line	CI On-line	0.63	lb/hr	Yes	EPA Method 25A
EU ST-1: Group 4 (Storage Tanks)	HCHO	Not Applicable		0.15	lb/hr	No	NA
	MeOH			0.11	lb/hr	No	NA
	Phenol			7.19E-07	lb/hr	No	NA
	VOC			0.26	lb/hr	No	NA
EU Boiler-1	NO _x	Natural Gas		9.75E-02	lb/MMBtu	No	NA
	CO	Natural Gas		8.19E-02	lb/MMBtu	No	NA
	VOC	Natural Gas		5.36E-03	lb/MMBtu	No	NA
EU FUG-1	HCHO	Valves (73 @52%, 18 @35%), Pumps (2)		0.05	lb/hr	No	NA
	MeOH	Valves (38), Pumps (2)		0.05	lb/hr	No	NA
	Phenol	Valves (50), Pumps (3), Connectors (110)		0.09	lb/hr	No	NA
	VOC	Combination of HCHO, MeOH, Phenol		0.20	lb/hr	No	NA



LANE REGIONAL AIR PROTECTION AGENCY

1010 Main Street, Springfield, Oregon 97477
(541) 736-1056

STANDARD AIR CONTAMINANT DISCHARGE PERMIT
(STANDARD ACDP)

Issued in accordance with provisions of Title 37, Lane Regional Air Protection Agency's Rules and Regulations, and based on the land use compatibility findings included in the permit record.

Issued To:

Arclin USA, LLC

475 North 28th Street
Springfield, Oregon 97477

Information Relied Upon:

Application No.: 67173

Date Received: April 29, 2021

Land Use Compatibility Finding:

Approving Authority: City of Springfield

Approval Date: June 20, 2000

Plant Site Location:

475 North 28th Street
Springfield, Oregon 97477

Fee Basis:

Title 37, Table 1:

Part B:

51. Organic or inorganic chemical
manufacturing and distribution

70. Synthetic resin manufacturing

Part C:

3. Source electing to maintain a netting basis

Permit Number: 201221

Permit Type: Standard

Primary SIC: 2821 Synthetic Resin Mfg

Secondary SIC: 2869 Organic Chemical Mfg

Date Renewed: December 6, 2023

Expiration Date: December 6, 2028

Issued

By: 

Susannah Sbragia, Acting Interim Director

Effective

Date: December 6, 2023

Table of Contents

Permitted Activities.....	3
Emission Unit Description	3
Plant Site Emission Limits (PSEL)	3
PSEL Monitoring and Compliance	4
Nuisance Emission Requirements	7
Facility-wide Emission Limits and Standards.....	8
Emissions Units SF-1: Group 1 and SF-2: Group 2 Formaldehyde Manufacturing Specific Emission Limits and Standards	11
Emissions Unit SF-3: Group 3 Formaldehyde Manufacturing Specific Emission Limits and Standards	11
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 [LRAPA 46-535(3)(III)]	11
40 CFR 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 [LRAPA 46-535(3)(bbb)]	14
Emissions Unit Boiler-1 Specific Emission Limits and Standards.....	24
40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [LRAPA 46-535(3)(e)]	24
Emissions Unit ST-1: Group 4 Storage Tanks and Containers (SM-9) Specific Emission Limits and Standards	24
40 CFR 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 [LRAPA 46-535(3)(r)]	24
Categorically Insignificant Activity: CIA-1 – Diesel-Fired 500 kW Emergency Generator	29
40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [LRAPA 44-150(5)(ffff)]	29
Emission Units SF-1, SF-2 and SF-3 Testing Requirements	32
Monitoring and Recordkeeping Requirements.....	34
Reporting Requirements	35
Outdoor Burning	36
Fee Schedule	36

Permitted Activities

1. Until this permit expires or is revoked, the permittee is herewith allowed to discharge air contaminants only in accordance with the permit application and the requirements, limitations, and conditions contained in this permit. This specific listing of requirements, limitations, and conditions does not relieve the permittee from complying with all other rules of Lane Regional Air Protection Agency (LRAPA).

Emission Unit Description

2. The emission units regulated by this permit are the following:

EU ID	Emission Unit Description	Control Device
Boiler-1	Bryan 17.0 MMBtu/hr stand-by boiler (low NO _x burners, tangential-fired)	None
SF-1: Group 1 Resin Manufacturing		
	SF-1 Air Oxidation Formaldehyde Process	Regenerative Thermal Oxidizer (RTO)
	Six (6) Resin Kettles and Associated Equipment	
	Raw Material and Resin Storage Tanks	
	Raw Material, Intermediate Products, Operating Chemicals and Finished Products, Unloading, Storage, and Loading Processes	
SF-2: Group 2 Formaldehyde Manufacturing		
	SF-2 Dehydrogenation Formaldehyde Process	Tail Gas Boiler (TGB) – Zurn, 6.8 MM BTU/hr boiler, tangential fired
SF-3: Group 3 Formaldehyde Manufacturing		
	SF-3 Air Oxidation Formaldehyde Process	Catalytic Incinerator (CI)
ST-1: Group 4 Storage Tanks and Containers		
	Methanol Storage Tank (SM-9)	Floating roof
	Methanol Storage Tanks (SM-1 and SM-2)	Floating roof
	Urea Bin Vents 1 and 2	Baghouse
	RTU Dry Material Hopper	Baghouse
	Melamine Dust Collector	Baghouse
	Storage Tanks and Containers	None
	5 Mixers (M-1 – M-5) and Associated Equipment	
	Raw Material, Intermediate Products, Operating Chemicals and Finished Products Unloading, Storage, and Loading Processes	
FUG-1	Fugitive Emission Components (Pumps, Blowers, Valves, and Flanges)	None
CIA-1	Categorically Insignificant Activity: Emergency Generator – 500 kW, diesel-fired, installed 2002	None

Plant Site Emission Limits (PSEL)

3. Total emissions from all sources located at the facility must not exceed the PSELs below. The PSELs apply to any 12 consecutive calendar month period. [LRAPA 42-0060, 42-0080(3) and

OAR 340-222-0041(3)]

Pollutant	PSEL (tons per year)
NO _x	11
CO	17
VOC	20
GHG	14,771
Individual HAP	9.4
Total HAP	24

4. Any changes in operation that may increase the emissions above the PSELs must be approved by LRAPA. Failure to do so may result in enforcement actions being taken by LRAPA. [LRAPA 42-0080]

PSEL Monitoring and Compliance

5. ***By the 15th of day each month***, the permittee must determine compliance with the 12-month rolling VOC and HAP(s) PSELs in accordance with the following procedures. [LRAPA 34-016 and LRAPA 42-0080(4)(c)]

- 5.a. The permittee must calculate the total calendar month emissions of VOCs and individual HAP using the following equation:

$$E_m = \left[\sum_{i=1}^n \frac{EF_i \cdot P_i}{2000} \right] \quad \text{Equation 1}$$

where: E_m = The total calendar month VOC or individual HAP emissions from all of the VOC or individual HAP-containing materials used, in tons;
 Σ = Symbol representing "summation of";
 EF = Emission factors listed in Condition 5.d;
 P = Process production (hours/month);
 i = Each individual VOC or HAP-containing material;
 n = The total number of individual VOC or HAP-containing materials; and
 2000 = The number of pounds in a short ton.

- 5.b. The permittee must calculate the total consecutive 12 calendar month emissions from the use of VOC and individual HAP-containing materials using the following equation:

$$E_{12} = \sum_{m=1}^{12} E_{m_i} \quad \text{Equation 2}$$

where: E_{12} = The total consecutive 12 calendar month VOC or individual HAP emissions, in tons;
 Σ = Symbol representing "summation of";
 E_{m_i} = The VOC or individual HAP emissions during each of the previous consecutive 12 calendar months, in tons, as calculated using Equation 1;

m = Each calendar month in the previous consecutive 12 calendar month period.

- 5.c. The permittee must calculate the total consecutive 12 calendar month emissions of the aggregate of all HAPs from HAP-containing materials using the following equation:

$$E_{12THAP} = \sum_{i=1}^n E_{12i} \quad \text{Equation 3}$$

where: E_{12THAP} = The total consecutive 12 calendar month emissions of the aggregate of all HAPs, in tons;
 Σ = Symbol representing "summation of";
 E_{12i} = The total individual HAP emissions during the previous consecutive 12 calendar months, in tons, as calculated using Equation 2;
n = The total number of individual HAP-containing materials.

- 5.d. The permittee must use the emission factors in the table below in the equation in Condition 5.a for calculating the 12-month rolling emissions to demonstrate compliance with the PSELS. [LRAPA 34-016]

Emissions Unit(s)	Pollutant	Fuels/Species/ Conditions		Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
						Yes/No	Test Method
EU: SF-1 Group 1 (RTO)	HCHO	SF-1 On-line	RTO On-line	1.78	lb/hr	Within 6 months of SF-1 restart	EPA Method 323 or Method 320
			RTO Off-line	4.35	lb/hr		
		SF-1 Off-line	RTO On-line	1.44	lb/hr	Yes	
			RTO Off-line	6.31	lb/hr		
	MeOH	SF-1 On-line	RTO On-line	1.50	lb/hr	Within 6 months of SF-1 restart	EPA Method 18 or Method 308
			RTO Off-line	12.82	lb/hr		
		SF-1 Off-line	RTO On-line	0.05	lb/hr	Yes	
			RTO Off-line	0.89	lb/hr		
	Phenol	SF-1 On-line	RTO On-line	0.19	lb/hr	Within 6 months of SF-1 restart	EPA Method 18
			RTO Off-line	0.73	lb/hr		
		SF-1 Off-line	RTO On-line	0.19	lb/hr	Yes	
			RTO Off-line	0.74	lb/hr		
	DME	SF-1 On-line	RTO On-line	0.69	lb/hr	Within 6 months of SF-1 restart	EPA Method 18
			RTO Off-line	17.80	lb/hr		
		SF-1 Off-line	RTO On-line	0.02	lb/hr	Yes	

Emissions Unit(s)	Pollutant	Fuels/Species/ Conditions	Emission Factor	Emission Factor Units	Emission Factor Verification Testing		
					Yes/No	Test Method	
	CO	SF-1 On-line	RTO Off-line	0.06	lb/hr		EPA Method 10
			RTO On-line	5.98	lb/hr	Within 6 months of SF-1 restart	
		RTO Off-line	115.8	lb/hr	Yes		
		SF-1 Off-line	RTO On-line	0.05		lb/hr	
			RTO Off-line	0.14		lb/hr	
	VOC	SF-1 On-line	RTO On-line	0.70	lb/hr	Within 6 months of SF-1 restart	EPA Method 25A
			RTO Off-line	17.56	lb/hr		
		SF-1 Off-line	RTO On-line	0.24	lb/hr	Yes	
			RTO Off-line	5.27	lb/hr		
	EU: SF-2 (TGB)	HCHO	SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart
TGB Off-line				1.36	lb/hr		
MeOH		SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 18 or Method 308
			TGB Off-line	46.5	lb/hr		
DME		SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 18
			TGB Off-line	1.44	lb/hr		
CO		SF-2 On-line	TGB On-line	0.02	lb/hr	Within 6 months of SF-2 restart	EPA Method 10
			TGB Off-line	18.05	lb/hr		
VOC		SF-2 On-line	TGB On-line	0.07	lb/hr	Within 6 months of SF-2 restart	EPA Method 25A
			TGB Off-line	70.2	lb/hr		
EU: SF-3 (CI)	HCHO	SF-3 On-line	CI On-line	0.15	lb/hr	Yes	EPA Method 323 or Method 320
	MeOH	SF-3 On-line	CI On-line	0.24	lb/hr	Yes	EPA Method 18 or Method 308

Emissions Unit(s)	Pollutant	Fuels/Species/ Conditions		Emission Factor	Emission Factor Units	Emission Factor Verification Testing	
						Yes/No	Test Method
	DME	SF-3 On-line	CI On-line	0.29	lb/hr	Yes	EPA Method 18
	CO	SF-3 On-line	CI On-line	0.83	lb/hr	Yes	EPA Method 10
	VOC	SF-3 On-line	CI On-line	0.69	lb/hr	Yes	EPA Method 25A
EU ST-1: Group 4 (Storage Tanks)	HCHO	Not Applicable		0.15	lb/hr	No	NA
	MeOH			0.11	lb/hr	No	NA
	Phenol			7.19E-07	lb/hr	No	NA
	VOC			0.26	lb/hr	No	NA
EU Boiler-1	NO _x	Natural Gas		9.75E-02	lb/MMBtu	No	NA
	CO	Natural Gas		8.19E-02	lb/MMBtu	No	NA
	VOC	Natural Gas		5.36E-03	lb/MMBtu	No	NA
EU FUG-1	HCHO	Valves (60 @52%, 18 @35%), Pumps (3)		0.02	lb/hr	No	NA
	MeOH	Valves (38), Pumps (2)		0.05	lb/hr	No	NA
	Phenol	Valves (50), Pumps (3), Connectors (110)		0.09	lb/hr	No	NA
	VOC	Combination of HCHO, MeOH, Phenol		0.16	lb/hr	No	NA

Nuisance Emission Requirements

6. The permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. [LRAPA 49-010(1)]
7. The permittee must not cause or permit the emission of particulate matter which is larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person. [LRAPA 32-055]
8. The permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property; such determination to be made by LRAPA. [LRAPA 32-090(1)]
9. The permittee must provide LRAPA with written notification within five (5) days of all nuisance complaints received by the permittee during the operation of the facility and maintain a log of each nuisance complaint received by the permittee during the operation of the facility. Documentation must include date of contact, time of observed nuisance condition, description of nuisance condition, location of complainant, status of plant operation during the observed period, and time of response to complainant. A plant representative must immediately (within one (1) hour during normal business hours) investigate the condition following the receipt of the nuisance complaint and a plant representative must provide a response to the complainant within 24 hours, if possible, but no later than five (5) business days. [LRAPA 34-016(1)]

Facility-wide Emission Limits and Standards

10. The permittee must not cause, suffer, allow or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions must include, but are not limited to the following: [LRAPA 48-015(1)]
 - 10.a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - 10.b. Application of water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - 10.c. Full or partial enclosure of materials stockpiles in cases where application of water or other suitable chemicals is not sufficient to prevent particulate matter from becoming airborne;
 - 10.d. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
 - 10.e. Adequate containment during sandblasting or other similar operations;
 - 10.f. The covering of moving, open bodied trucks transporting materials likely to become airborne;
 - 10.g. The prompt removal from paved streets of earth or other material which does or may become airborne.
11. The permittee must demonstrate compliance with Condition 10 by conducting a fugitive emissions survey. At least once each month for a minimum period of 30 minutes, the permittee must visually survey the facility using EPA Method 22 for any sources of fugitive emissions. For purposes of this condition, fugitive emissions are visible emissions that leave the plant site boundary for a period or periods totaling more than 18 seconds in a six-minute period. The person conducting EPA Method 22 does not have to be EPA Method 9 certified. However, the individual conducting EPA Method 22 should be familiar with the procedures of EPA Method 9, including using the proper location to observe visible emissions. [LRAPA 34-016(1) and LRAPA 48-015(2)&(3)]
 - 11.a. If sources of fugitive emissions are identified that leave the plant site boundary for a period or periods totaling more than 18 seconds in a six-minute period, the permittee must immediately take corrective action to minimize the fugitive emissions, including but not limited to those actions identified in Condition 10. After taking corrective action, the permittee must conduct another fugitive emissions survey using EPA Method 22 within 24 hours of the previous fugitive emissions survey.
 - 11.b. If the fugitive emissions survey performed within 24 hours of the previous fugitive emissions survey detects visible emissions that leave the plant site boundary for a period or periods totaling more than 18 seconds in a six-minute period, the permittee must immediately notify LRAPA. LRAPA may require the facility to develop and implement a Fugitive Emission Control Plan to prevent any visible emissions from leaving the plant site boundary.
12. The permittee must keep documentation of all visible emissions surveys required by Condition 11. For all corrective actions taken, the permittee must record the date, time, person or entity performing the corrective action, and the corrective actions taken, as applicable. [LRAPA 34-016(1)]
13. For fuel burning equipment sources installed, constructed, or modified after June 1, 1970, but

- prior to April 16, 2015, for which there are no representative compliance source test results prior to April 16, 2015, the permittee must not cause, suffer, allow, or permit particulate matter emissions in excess of 0.14 grains per dry standard cubic foot. [LRAPA 32-030(1)(b)]
14. For fuel burning equipment sources installed, constructed, or modified after April 16, 2015, the permittee must not cause, suffer, allow, or permit particulate matter emissions from any fuel burning equipment in excess of 0.10 grains per dry standard cubic foot. [LRAPA 32-030(2)]
 15. For any air contaminant sources installed, constructed or modified on or after June 1, 1970 but prior to April 16, 2015, other than fuel burning equipment, refuse burning equipment and fugitive emissions, for which there are no representative compliance source test results prior to April 16, 2015, the permittee must not cause, suffer, allow, or permit particulate matter emissions in excess of 0.14 grains per dry standard cubic foot. [LRAPA 32-015(2)(b)(B)]
 16. For any air contaminant source installed, constructed or modified after April 16, 2015, other than fuel burning equipment, refuse burning equipment and fugitive emissions, the permittee must not cause, suffer, allow, or permit particulate matter emissions in excess of 0.10 grains per dry standard cubic foot. [LRAPA 32-015(2)(c)]
 17. For sources, other than wood-fired boilers, the permittee must not emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. [LRAPA 32-010(3)]
 18. The permittee must not cause, suffer, allow or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in LRAPA 32-8010, for the process weight allocated to the process. [LRAPA 32-045(1)]
 19. The permittee must demonstrate compliance with Conditions 13 through 18 by performing a visible emissions survey of the plant. At least monthly for a minimum period of 30 minutes, the permittee must visually survey the plant using EPA Method 22 for any sources of visible emissions. For the purposes of this condition, visible emissions requiring action are considered to be any visible emissions that do not result from mobile or fugitive sources and are not the result of condensed water vapor. The person conducting the EPA Method 22 does not have to be EPA Method 9 certified. However, the individual conducting the EPA Method 22 should be familiar with the procedures of EPA Method 9, including using the proper location to observe visible emissions. [LRAPA 34-016(1)]
 - 19.a. If visible emissions are observed using EPA Method 22, the permittee must take corrective action to eliminate the visible emissions within one (1) hour of finishing the visible emissions survey. After taking corrective action to eliminate the visible emissions, the permittee must conduct another visible emissions survey using EPA Method 22 within 24 hours of the previous visible emissions survey. [LRAPA 34-016(1)]
 - 19.b. If the visible emissions survey performed within 24 hours of the previous visible emissions survey detects visible emissions from the same source(s), the permittee is required to perform a Modified EPA Method 9 on the source(s) of visible emissions. If the results of the Modified EPA Method 9 are in compliance with Condition 17, no further action is required beyond the recordkeeping required in Condition 20. If the results of the Modified EPA Method 9 are not in compliance with Condition 17, the permittee must immediately contact LRAPA. [LRAPA 34-016(1)]
 20. The permittee must keep documentation of all visible emissions surveys required by Condition 19. For all corrective actions taken, the permittee must record the date, time, person or entity conducting the corrective action, and the corrective actions taken, as applicable, [LRAPA 34-016(1)]
 21. All plant process equipment and all air contaminant collection and disposal facilities, including baghouses and dust collectors, must be operated and maintained at the highest and best practicable treatment and control of air contaminant emissions so as to maintain overall air quality at the highest possible levels, and to maintain contaminant concentrations, visibility reduction,

odors, soiling, and other deleterious factors at the lowest possible levels. [LRAPA 32-005(1)]

22. The permittee must demonstrate compliance with Conditions 21 by preparing and updating, as necessary, an Operation and Maintenance Plan (O&M Plan). The O&M Plan must include requirements for the proper operation and maintenance of all particulate matter emission control devices at the facility, including but not limited to baghouses and dust collectors. The permittee must submit a copy of the O&M Plan to LRAPA for review upon request. If LRAPA determines the O&M Plan is deficient, LRAPA may require the permittee to amend the plan. For each particulate matter emission control device, the O&M Plan must, at a minimum, identify the frequency of inspections and procedures for documenting each inspection. Documentation of each inspection must include the date and time of each inspection, the person or entity performing the inspection, identification of the equipment inspected, the results of each inspection, and any actions taken if repairs or maintenance are necessary. [LRAPA 32-007(1)(b)]

Emissions Units SF-1: Group 1 and SF-2: Group 2 Formaldehyde Manufacturing Specific Emission Limits and Standards

23. The permittee must monitor and record the temperature in the combustion chamber of the EU SF-1: Group 1 – RTO, on a 15-minute basis. [LRAPA 32-007(1)]
- 23.a. On a 3-hour block average, the permittee must identify and record all temperature excursions in the combustion chamber of the RTO below 1,400°F (760°C), except during startup or shutdown.. [LRAPA 32-007(1)]
- 23.b. For the temperature excursions defined in Condition 23.a, the permittee must use the “SF-1 on-line, RTO off-line” or “SF-1 off-line, RTO off-line” emission factors in Condition 5.d, as appropriate, to calculate the emissions for each excursion, on a per-hour basis. [LRAPA 32-007(1)]
- 23.c. In order to demonstrate compliance with the PSEs established in Condition 3 and calculated as detailed in Condition 5, the permittee must not operate more than 2500 hours on a 12-month rolling basis in an operating scenario with the “RTO off-line.” [LRAPA 32-007(1)]
24. The permittee must monitor and record the temperature of the exhaust from the Tail Gas Boiler (TGB), on a 15-minute basis. [LRAPA 32-007(1)]
- 24.a. On a 3-hour block average, the permittee must identify and record all temperature excursions in the exhaust gas from the TGB below 257°F (125°C), except during startup or shutdown of the TGB or when SF-2 is off-line. [LRAPA 32-007(1)]
- 24.b. For the temperature excursions defined in Condition 24.a, the permittee must use the “SF-2 on-line, TGB off-line” emission factors in Condition 5.d to calculate the emissions for each excursion, on a per-hour basis. [LRAPA 32-007(1)]
- 24.c. In order to demonstrate compliance with the PSEs established in Condition 3 and calculated as detailed in Condition 5, the permittee must not operate more than 280 hours on a 12-month rolling basis in the operating scenario of “SF-2 on-line, TGB off-line.” [LRAPA 32-007(1)]

Emissions Unit SF-3: Group 3 Formaldehyde Manufacturing Specific Emission Limits and Standards

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
[LRAPA 46-535(3)(III)]

25. The permittee must comply with Subpart III by reducing emissions of total organic compounds (TOC) (minus methane and ethane) from EU SF-3: Group 3 by 98 weight-percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent. [40 CFR 60.612(a)]
26. The permittee of an affected source that uses an incinerator to seek to comply with the TOC emission limit specified in Condition 25 must install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment: [40 CFR 60.613(a)]
- 26.a. A temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 1 percent of the temperature being monitored expressed in degrees Celsius or ± 0.5 °C, whichever is greater. [40 CFR 60.613(a)(1)]
- 26.a.i. Where a catalytic incinerator is used, temperature monitoring devices must be installed in the gas stream immediately before and after the catalyst bed. [40 CFR 60.613(a)(1)(ii)]

- 26.b. A flow indicator that provides a record of vent stream flow to the incinerator at least once every hour for each affected source. The flow indicator must be installed in the vent stream from each affected facility at a point closest to the inlet of each incinerator and before being joined with any other vent stream. [40 CFR 60.613(a)(2)]

EU SF-3: Group 3 Subpart III Testing

27. The permittee must run all affected sources at full operating conditions and flow rates during any performance test, for the purpose of demonstrating compliance with Condition 25. [40 CFR 60.614(a)]
28. The following methods in 40 CFR 60 subpart III, appendix A, except as provided under 40 CFR 60.8(b) must be used by the permittee as reference methods to determine compliance with the emission limit or percent reduction efficiency specified under Condition 25. [40 CFR 60.614(b)]
- 28.a. Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency must be prior to the inlet of the control device and after the recovery system. [40 CFR 60.614(b)(1)]
- 28.b. Method 2, 2A, 2C, or 2D, as appropriate, for determination of the volumetric flow rates. [40 CFR 60.614(b)(2)]
- 28.c. The emission rate correction factor, integrated sampling and analysis procedure of Method 3 must be used to determine the oxygen concentration (%O_{2d}) for the purposes of determining compliance with the 20 ppmv limit. The sampling site must be the same as that of the TOC samples and the samples must be taken during the same time that the TOC samples are taken. The TOC concentration corrected to 3 percent O₂ (C_c) must be computed using the following equation: [40 CFR 60.614(b)(3)]

$$C_c = C_{TOC} \frac{17.9}{20.9 - \%O_{2d}}$$

Where:

C_c = Concentration of TOC corrected to 3 percent O₂, dry basis, ppm by volume.
C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.
%O_{2d} = Concentration of O₂, dry basis, percent by volume.

- 28.d. Method 18 to determine concentration of TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined. [40 CFR 60.614(b)(4)]
- 28.d.i. The sampling time for each run must be one (1) hour in which either an integrated sample or four grab samples must be taken. If grab sampling is used then the samples must be taken at 15-minute intervals. [40 CFR 60.614(b)(4)(i)]
- 28.d.ii. The emission reduction (R) of TOC (minus methane and ethane) must be determined using the following equation: [40 CFR 60.614(b)(4)(ii)]

$$R = \frac{E_i - E_o}{E_i} \times 100$$

Where:

R = Emission reduction, percent by weight.
E_i = Mass rate of TOC entering the control device, kg/hr (lb/hr).
E_o = Mass rate of TOC discharged to the atmosphere, kg/hr (lb/hr).

- 28.d.iii. The mass rates of TOC (E_i, E_o) must be computed using the following equations: [40 CFR 60.614(b)(4)(iii)]

$$E_i = K_2 \left(\sum_{j=1}^n C_{ij} M_{ij} \right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^n C_{oj} M_{oj} \right) Q_o$$

Where:

- C_{ij} , C_{oj} = Concentration of sample component “j” of the gas stream at the inlet and outlet of the control device, respectively, dry basis ppm by volume.
 M_{ij} , M_{oj} = Molecular weight of sample component “j” of the gas stream at the inlet and outlet of the control device, respectively, g/g-mole (lb/lb-mole).
 Q_i , Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/min).
 K_2 = 2.494×10^{-6} (1/ppm)(g-mole/scm)(kg/g)(min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 °C.
= 1.557×10^{-7} (1/ppm)(lb-mole/scf)(min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 °F.

28.d.iv. The TOC concentration (C_{TOC}) is the sum of the individual components and must be computed for each run using the following equation: [40 CFR 60.614(b)(4)(iv)]

$$C_{TOC} = \sum_{j=1}^n C_j$$

Where:

- C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.
 C_j = Concentration of sample components in the sample.
 n = Number of components in the sample.

EU SF-3: Group 3 Subpart III Recordkeeping

29. The permittee subject to the provisions of 40 CFR 60 subpart III must keep up-to-date, readily accessible records of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 CFR 60.8. The same data specified in this section must be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device or outlet concentration of TOC is determined. [40 CFR 60.615(b)]
- 29.a. Where the permittee seeks to demonstrate compliance with Condition 25 through use of either a thermal or catalytic incinerator: [40 CFR 60.615(b)(1)]
- 29.a.i. The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured at least every 15 minutes and averaged over the same time period of the performance testing, and [40 CFR 60.615(b)(1)(i)]
- 29.a.ii. The percent reduction of TOC determined as specified in Condition 28 achieved by the incinerator, or the concentration of TOC (ppmv, by compound) determined as specified in Condition 28 at the outlet of the control device on a dry basis corrected to 3 percent oxygen. [40 CFR 60.615(b)(1)(ii)]
30. The permittee must keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under Condition 26, as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established

during the most recent performance test are exceeded. LRAPA may at any time require a report of these data. Where a combustion device is used by the permittee seeking to demonstrate compliance with Condition 25, periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows: [40 CFR 60.615(c)]

- 30.a. For catalytic incinerators, all 3-hour periods of operation during which the average temperature of the vent stream immediately before the catalyst bed is more than 28°C (50 °F) below the average temperature of the vent stream during the most recent performance test at which compliance with Condition 25 was determined. The permittee also must record all 3-hour periods of operation during which the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the device during the most recent performance test at which compliance with Condition 25 was determined. [40 CFR 60.615(c)(2)]
- 31. The permittee must keep up-to-date, readily accessible continuous records of the flow indication specified under Condition 26, as well as up-to-date, readily accessible records of all periods when the vent stream is diverted from the control device or has no flow rate. [40 CFR 60.615(d)]

EU SF-3: Group 3 Subpart III Reporting

- 32. The permittee subject to the provisions of 40 CFR 60 subpart III is exempt from the quarterly reporting requirements contained in 40 CFR 60.7(c) of the General Provisions. [40 CFR 60.615(i)]
- 33. The permittee that seeks to comply with the requirements of 40 CFR 60 subpart III by complying with the requirements of Condition 25 must submit to LRAPA semi-annual reports of the following information. The initial report must be submitted within six (6) months after the initial start-up-date. [40 CFR 60.615(j)]
 - 33.a. Exceedances of monitoring parameters recorded under Condition 30. [40 CFR 60.615(j)(1)]
 - 33.b. All periods recorded under Condition 31 when the vent stream is diverted from the control device or has no flow rate. [40 CFR 60.615(j)(2)]
- 34. The requirements of Condition 33 remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with Condition 33, provided that the permittee comply with the requirements established by LRAPA. [40 CFR 60.615(k)]
- 35. LRAPA will specify appropriate reporting and recordkeeping requirements where the permittee of an affected source seeks to demonstrate compliance with the standards specified under Condition 25, other than as provided under Condition 26. [40 CFR 60.615(l)]

40 CFR 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 [LRAPA 46-535(3)(bbb)]

EU SF-3: Group 3 Subpart VV General Standards

- 36. Standards: General [40 CFR 60.482-1]
 - 36.a. The permittee must demonstrate compliance with the requirements of Conditions 36 through 40 for all equipment within 180 days of initial startup. [40 CFR 60.482-1(a)]
 - 36.b. Compliance with Conditions 36 through 40 must be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in Condition 42. [40 CFR 60.482-1(b)]

- 36.c. Equipment that is in vacuum service is excluded from the requirements of Conditions 36 through 40 if it is identified as required in Condition 43.d.iv. [40 CFR 60.482-1(d)]
- 36.d. Equipment that a permittee designates as being in VOC service less than 300 hours (hr)/yr is excluded from the requirements of Conditions 36 through 40 if it is identified as required in Condition 43.d.iv and it meets any of the conditions specified in Conditions 36.d.i through 36.d.iii. [40 CFR 60.482-1(e)]
- 36.d.i. The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process. [40 CFR 60.482-1(e)(1)]
- 36.d.ii. The equipment is in VOC service only during process malfunctions or other emergencies. [40 CFR 60.482-1(e)(2)]
- 36.d.iii. The equipment is backup equipment that is in VOC service only when the primary equipment is out of service. [40 CFR 60.482-1(e)(3)]
- 36.e. If a dedicated batch process unit operates less than 365 days during a year, the permittee may monitor to detect leaks from pumps and valves at the frequency specified in the following table instead of monitoring as specified in Conditions 37 and 39. Pumps and valves that are shared among two or more batch process units that are subject to 40 CFR 60 subpart VV may be monitored at the frequencies specified in Condition 36.e, provided the operating time of all such process units is considered. The monitoring frequencies specified in Condition 36.e are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. The permittee may monitor at any time 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. Reasonable intervals are defined in Conditions 36.e.i through 36.e.iv. [40 CFR 60.482-1(f)(1)-(3)]
- 36.e.i. When monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days. [40 CFR 60.482-1(f)(3)(i)]
- 36.e.ii. When monitoring is conducted semiannually (i.e., once every 2 quarters), monitoring events must be separated by at least 60 calendar days. [40 CFR 60.482-1(f)(3)(ii)]
- 36.e.iii. When monitoring is conducted in three (3) quarters per year, monitoring events must be separated by at least 90 calendar days. [40 CFR 60.482-1(f)(3)(iii)]
- 36.e.iv. When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days. [40 CFR 60.482-1(f)(3)(iv)]

Operating time (percent of hours during year)	Equivalent monitoring frequency time in use		
	Monthly	Quarterly	Semiannually
0 to <25	Quarterly	Annually	Annually.
25 to <50	Quarterly	Semiannually	Annually.
50 to <75	Bimonthly	Three quarters	Semiannually.
75 to 100	Monthly	Quarterly	Semiannually.

- 36.f. If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to 40 CFR 60 subpart VVa, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to 40 CFR 60 subpart VVa, the storage vessel is assigned to any process unit subject to 40 CFR 60 subpart VV. If the predominant use of the storage vessel varies from year to year, then the permittee

must estimate the predominant use initially and reassess every three (3) years. The permittee must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service. [40 CFR 60.482-1(g)]

EU SF-3: Group 3 Subpart VV Standards

37. Standards: Pumps in light liquid service [40 CFR 60.482-2]

- 37.a. Each pump in light liquid service must be monitored monthly to detect leaks by the methods specified in Condition 42.b, except as provided in Condition 36.e and Conditions 37.d, 37.e, and 37.f. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in Condition 36.e and Conditions 37.d, 37.e, and 37.f. Each pump in light liquid service must be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in Condition 36.e. [40 CFR 60.482-2(a)]
- 37.b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, the permittee must follow the procedure specified in either Condition 37.b.i or 37.b.ii. This requirement does not apply to a pump that was monitored after a previous weekly inspection if the instrument reading for that monitoring event was less than 10,000 ppm and the pump was not repaired since that monitoring event. [40 CFR 60.482-2(b)]
 - 37.b.i. Monitor the pump within five (5) days as specified in Condition 42.b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. The leak must be repaired using the procedures in Condition 37.c. [40 CFR 60.482-2(b)(2)(i)]
 - 37.b.ii. Designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping. [40 CFR 60.482-2(b)(2)(ii)]
- 37.c. When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 41. A first attempt at repair must be made no later than five (5) calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in Condition 37.c.i and 37.c.ii, where practicable. [40 CFR 60.482-2(c)]
 - 37.c.i. Tightening the packing gland nuts; [40 CFR 60.482-2(c)(2)(i)]
 - 37.c.ii. Ensuring that the seal flush is operating at design pressure and temperature. [40 CFR 60.482-2(c)(2)(ii)]
- 37.d. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Condition 37.a, provided the requirements specified in Condition 37.d.i through 37.d.vi are met. [40 CFR 60.482-2(d)]
 - 37.d.i. Each dual mechanical seal system is— [40 CFR 60.482-2(d)(1)]
 - 37.d.i.1. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or [40 CFR 60.482-2(d)(1)(i)]
 - 37.d.i.2. Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or [40 CFR 60.482-2(d)(1)(ii)]
 - 37.d.i.3. Equipped with a system that purges the barrier fluid into a process

stream with zero VOC emissions to the atmosphere. [40 CFR 60.482-2(d)(1)(iii)]

- 37.d.ii. The barrier fluid system is in heavy liquid service or is not in VOC service. [40 CFR 60.482-2(d)(2)]
- 37.d.iii. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [40 CFR 60.482-2(d)(3)]
- 37.d.iv. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the permittee must follow the procedure specified in either Condition 37.d.iv.1 or 37.d.iv.2. [40 CFR 60.482-2(d)(4)]
 - 37.d.iv.1. Monitor the pump within 5 days as specified in Condition 42.b to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-2(d)(4)(i)(A)]
 - 37.d.iv.2. Designate the visual indications of liquids dripping as a leak. [40 CFR 60.482-2(d)(4)(i)(B)]
- 37.d.v. Each sensor as described in Condition 37.d.iii is checked daily or is equipped with an audible alarm. The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in this section, a leak is detected. [40 CFR 60.482-2(d)(5)]
- 37.d.vi. When a leak is detected pursuant to Condition 37.d.iv.1, it must be repaired as specified in Condition 37.c. A leak detected pursuant to Condition 37.d.v must be repaired within 15 days of detection by eliminating the conditions that activated the sensor. A designated leak pursuant to Condition 37.d.iv.2 must be repaired within 15 days of detection by eliminating visual indications of liquids dripping. [40 CFR 60.482-2(d)(6)]
- 37.e. Any pump that is designated, as described in Condition 43.d.i and 43.d.ii, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Condition 37.a, 37.c, and 37.d if the pump: [40 CFR 60.482-2(e)]
 - 37.e.i. Has no externally actuated shaft penetrating the pump housing, [40 CFR 60.482-2(e)(1)]
 - 37.e.ii. Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Condition 42.c, and [40 CFR 60.482-2(e)(2)]
 - 37.e.iii. Is tested for compliance with Condition 37.e.ii initially upon designation, annually, and at other times requested by LRAPA. [40 CFR 60.482-2(e)(3)]
- 37.f. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482-10, it is exempt from Conditions 37.a through 37.e. [40 CFR 60.482-2(f)]
- 37.g. Any pump that is designated, as described in Condition 43.e.i, as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of Conditions 37.a and 37.d.iv through 37.d.vi if: [40 CFR 60.482-2(g)]
 - 37.g.i. The permittee of the pump demonstrates that the pump is unsafe-to-monitor

because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition 37.a; and [40 CFR 60.482-2(g)(1)]

- 37.g.ii. The permittee of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in Condition 37.c if a leak is detected. [40 CFR 60.482-2(g)(2)]
- 37.h. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of Condition 37.a and 37.d.iv, and the daily requirements of Condition 37.d.v, provided that each pump is visually inspected as often as practicable and at least monthly. [40 CFR 60.482-2(h)]
- 38. Standards for Open-ended Valves or Lines [40 CFR 60.482-6]
 - 38.a. Each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve, except as provided in Conditions 38.d and 38.e. The cap, blind flange, plug, or second valve must seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. [40 CFR 60.482-6(a)]
 - 38.b. Each open-ended valve or line equipped with a second valve must be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. [40 CFR 482-6(b)]
 - 38.c. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but must comply with Condition 38.a at all other times. [40 CFR 482-6(c)]
 - 38.d. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of Conditions 38.a, 38.b, and 38.c. [40 CFR 482-6(d)]
 - 38.e. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in Conditions 38.a through 38.c are exempt from the requirements of Conditions 38.a through 38.c. [40 CFR 482-6(e)]
- 39. Standards for Valves in Gas/Vapor Service and in Light Liquid Service [40 CFR 60.482-7]
 - 39.a. Each valve must be monitored monthly to detect leaks by the methods specified in Condition 42.b and must comply with Conditions 39.b through 39.e except as provided in Conditions 39.f, 39.g, and 39.h, and 36.e. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to Conditions 39.a.i or 39.a.ii, except for a valve that replaces a leaking valve and except as provided in Conditions 39.f, 39.g, and 39.h. [40 CFR 60.482-7(a)]
 - 39.a.i. Monitor the valve as in Condition 39.a. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation. [40 CFR 60.482-7(a)(2)(i)]
 - 39.a.ii. If the valves on the process unit are monitored in accordance with 40 CFR 60.483-1 or 40 CFR 60.483-2, count the new valve as leaking when calculating the percentage of valves leaking as described in 40 CFR 60.483-2(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first. [40 CFR 60.482-7(a)(2)(ii)]
 - 39.b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40

CFR 60.482-7(b)]

- 39.c. Any valve for which a leak is not detected for two (2) successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. As an alternative to monitoring all of the valves in the first month of a quarter, the permittee may elect to subdivide the process unit into two (2) or three (3) subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every three (3) months. The permittee must keep records of the valves assigned to each subgroup. If a leak is detected, the valve must be monitored monthly until a leak is not detected for two (2) successive months. [40 CFR 60.482-7(c)]
- 39.d. When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Condition 41. A first attempt at repair must be made no later than five (5) calendar days after each leak is detected. [40 CFR 60.482-7(d)]
- 39.e. First attempts at repair include, but are not limited to, the following best practices where practicable: [40 CFR 60.482-7(e)]
 - 39.e.i. Tightening of bonnet bolts; [40 CFR 60.482-7(e)(1)]
 - 39.e.ii. Replacement of bonnet bolts; [40 CFR 60.482-7(e)(2)]
 - 39.e.iii. Tightening of packing gland nuts; [40 CFR 60.482-7(e)(3)]
 - 39.e.iv. Injection of lubricant into lubricated packing. [40 CFR 60.482-7(e)(4)]
- 39.f. Any valve that is designated, as described in Condition 43.d.ii, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Condition 39.a if the valve: [40 CFR 60.482-7(f)]
 - 39.f.i. Has no external actuating mechanism in contact with the process fluid, [40 CFR 60.482-7(f)(1)]
 - 39.f.ii. Is operated with emissions less than 500 ppm above background as determined by the method specified in Condition 42.c, and [40 CFR 60.482-7(f)(2)]
 - 39.f.iii. Is tested for compliance with Condition 39.f.ii initially upon designation, annually, and at other times requested by LRAPA. [40 CFR 60.482-7(f)(3)]
- 39.g. Any valve that is designated, as described in Condition 43.e.i, as an unsafe-to-monitor valve is exempt from the requirements of Condition 39.a if: [40 CFR 60.482-7(g)]
 - 39.g.i. The permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition 39.a, and [40 CFR 60.482-7(g)(1)]
 - 39.g.ii. The permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. [40 CFR 60.482-7(g)(2)]
- 39.h. Any valve that is designated, as described in Condition 43.e.ii, as a difficult-to-monitor valve is exempt from the requirements of Condition 39.a if: [40 CFR 60.482-7(h)]
 - 39.h.i. The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than two (2) meters above a support surface. [40 CFR 60.482-7(h)(1)]
 - 39.h.ii. The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and [40 CFR 60.482-7(h)(2)]
 - 39.h.iii. The permittee follows a written plan that requires monitoring of the valve at least

once per calendar year. [40 CFR 60.482-7(h)(3)]

40. Standards for Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors [40 CFR 60.482-8]
- 40.a. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the permittee must follow either one of the following procedures: [40 CFR 60.482-8(a)]
- 40.a.i. The permittee must monitor the equipment within five (5) days by the method specified in Condition 42.b and must comply with the requirements of Conditions 40.b through 40.d. [40 CFR 60.482-8(a)(1)]
- 40.a.ii. The permittee must eliminate the visual, audible, olfactory, or other indication of a potential leak within five (5) calendar days of detection. [40 CFR 60.482-8(a)(2)]
- 40.b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-8(b)]
- 40.c. When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 41. The first attempt at repair must be made no later than five (5) calendar days after each leak is detected. [40 CFR 60.482-8(c)]
- 40.d. First attempts at repair include, but are not limited to, the best practices described under Conditions 37.c and 39.e. [40 CFR 60.482-8(d)]
41. Standards for Delay of Repair [40 CFR 60.482-9]
- 41.a. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment must occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit. [40 CFR 60.482-9(a)]
- 41.b. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. [40 CFR 60.482-9(b)]
- 41.c. Delay of repair for valves will be allowed if: [40 CFR 60.482-9(c)]
- 41.c.i. The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and [40 CFR 60.482-9(c)(1)]
- 41.c.ii. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10. [40 CFR 60.482-9(c)(2)]
- 41.d. Delay of repair for pumps will be allowed if: [40 CFR 60.482-9(d)]
- 41.d.i. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and [40 CFR 60.482-9(d)(1)]
- 41.d.ii. Repair is completed as soon as practicable, but not later than six (6) months after the leak was detected. [40 CFR 60.482-9(d)(2)]
- 41.e. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than six (6) months after the first process unit shutdown. [40 CFR 60.482-9(e)]

- 41.f. When delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition. [40 CFR 60.482-9(f)]

42. Test Methods and Procedures [40 CFR 60.485]

- 42.a. In conducting the performance tests required in 40 CFR 60.8, the permittee must use as reference methods and procedures the test methods in appendix A of 40 CFR 60 or other methods and procedures as specified in Condition 42, except as provided in 40 CFR 60.8(b). [40 CFR 60.485(a)]
- 42.b. The permittee must determine compliance with the standards in Conditions 36 through 40 as follows: [40 CFR 60.485(b)]
 - 42.b.i. Method 21 must be used to determine the presence of leaking sources. The instrument must be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases must be used: [40 CFR 60.485(b)(1)]
 - 42.b.i.1. Zero air (less than 10 ppm of hydrocarbon in air); and [40 CFR 60.485(b)(1)(i)]
 - 42.b.i.2. A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [40 CFR 60.485(b)(1)(ii)]
- 42.c. The permittee must determine compliance with the no detectable emission standards in Conditions 37.e and 39.f, as follows: [40 CFR 60.485(c)]
 - 42.c.i. The requirements of Condition 42.b must apply. [40 CFR 60.485(c)(1)]
 - 42.c.ii. Method 21 must be used to determine the background level. All potential leak interfaces must be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance. [40 CFR 60.485(c)(2)]
- 42.d. The permittee must test each piece of equipment unless they demonstrate that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures must be used: [40 CFR 60.485(d)]
 - 42.d.i. Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference – see 40 CFR 60.17) must be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment. [40 CFR 60.485(d)(1)]
 - 42.d.ii. Organic compounds that are considered by LRAPA to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid. [40 CFR 60.485(d)(2)]
 - 42.d.iii. Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If LRAPA disagrees with the judgment, Conditions 42.d.i and 42.d.ii must be used to resolve the disagreement. [40 CFR 60.485(d)(3)]
- 42.e. The permittee must demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply: [40 CFR 60.485(e)]
 - 42.e.i. The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F). Standard reference texts or ASTM D2879-83,

- 96, or 97 (incorporated by reference – see 40 CFR 60.17) must be used to determine the vapor pressures. [40 CFR 60.485(e)(1)]
- 42.e.ii. The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F) is equal to or greater than 20 percent by weight. [40 CFR 60.485(e)(2)]
- 42.e.iii. The fluid is a liquid at operating conditions. [40 CFR 60.485(e)(3)]
- 42.f. Samples used in conjunction with Conditions 42.d and 42.e must be representative of the process fluid that is contained in or contacts the equipment. [40 CFR 60.485(f)]
43. Recordkeeping Requirements [40 CFR 60.486]
- 43.a. The permittee must comply with the recordkeeping requirements of Condition 43. A permittee of more than one affected facility subject to 40 CFR 60 subpart VV may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility. [40 CFR 60.486(a)]
- 43.b. When each leak is detected as specified in Conditions 37, 39, and 40, the following requirements apply: [40 CFR 60.486(b)]
- 43.b.i. A weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. [40 CFR 60.486(b)(1)]
- 43.b.ii. The identification on a valve may be removed after it has been monitored for two (2) successive months as specified in Condition 39.c and no leak has been detected during those two (2) months. [40 CFR 60.486(b)(2)]
- 43.b.iii. The identification on equipment except on a valve, may be removed after it has been repaired. [40 CFR 60.486(b)(3)]
- 43.c. When each leak is detected as specified in Conditions 37, 39, and 40, the following information must be recorded in a log and must be kept for two (2) years in a readily accessible location: [40 CFR 60.486(c)]
- 43.c.i. The instrument and operator identification numbers and the equipment identification number. [40 CFR 60.486(c)(1)]
- 43.c.ii. The date the leak was detected and the dates of each attempt to repair the leak. [40 CFR 60.486(c)(2)]
- 43.c.iii. Repair methods applied in each attempt to repair the leak. [40 CFR 60.486(c)(3)]
- 43.c.iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in Condition 42.a after each repair attempt is equal to or greater than 10,000 ppm. [40 CFR 60.486(c)(4)]
- 43.c.v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 60.486(c)(5)]
- 43.c.vi. The signature of the permittee (or designate) whose decision it was that repair could not be effected without a process shutdown. [40 CFR 60.486(c)(6)]
- 43.c.vii. The expected date of successful repair of the leak if a leak is not repaired within 15 days. [40 CFR 60.486(c)(7)]
- 43.c.viii. Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 60.486(c)(8)]
- 43.c.ix. The date of successful repair of the leak. [40 CFR 60.486(c)(9)]
- 43.d. The following information pertaining to all equipment subject to the requirements in Conditions 36 through 40 must be recorded in a log that is kept in a readily accessible

location: [40 CFR 60.486(e)]

- 43.d.i. A list of identification numbers for equipment subject to the requirements of 40 CFR 60 subpart VV. [40 CFR 60.486(e)(1)]
- 43.d.ii. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions 37.e and 39.f. The designation of equipment as subject to the requirements of Conditions 37.e and 39.f must be signed by the permittee. Alternatively, the permittee may establish a mechanism with LRAPA that satisfies this requirement. [40 CFR 60.486(e)(2)]
- 43.d.iii. The dates of each compliance test as required in Conditions 37.e and 39.f. The background level measured during each compliance test. The maximum instrument reading measured at the equipment during each compliance test. [40 CFR 60.486(e)(4)]
- 43.d.iv. A list of identification numbers for equipment in vacuum service. [40 CFR 60.486(e)(5)]
- 43.d.v. A list of identification numbers for equipment that the permittee designates as operating in VOC service less than 300 hr/yr in accordance with Condition 36.d, a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr. [40 CFR 60.486(e)(6)]
- 43.e. The following information pertaining to all valves subject to the requirements of Conditions 39.g and 39.h and to all pumps subject to the requirements of Condition 37.g must be recorded in a log that is kept in a readily accessible location: [40 CFR 60.486(f)]
 - 43.e.i. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump. [40 CFR 60.486(f)(1)]
 - 43.e.ii. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve. [40 CFR 60.486(f)(2)]
- 43.f. The following information must be recorded in a log that is kept in a readily accessible location: [40 CFR 60.486(h)]
 - 43.f.i. Design criterion required in Condition 37.d.v and explanation of the design criterion; and [40 CFR 60.486(h)(1)]
 - 43.f.ii. Any changes to this criterion and the reasons for the changes. [40 CFR 60.486(h)(2)]
- 43.g. Information and data used to demonstrate that a piece of equipment is not in VOC service must be recorded in a log that is kept in a readily accessible location. [40 CFR 60.486(j)]
- 43.h. The provisions of 40 CFR §60.7(b) and (d) do not apply to affected facilities subject to 40 CFR 60 subpart VV. [40 CFR 60.486(k)]
- 44. Reporting Requirements [40 CFR 60.487]
 - 44.a. The permittee must submit semiannual reports to LRAPA beginning six months after the initial startup date. [40 CFR 60.487(a)]
 - 44.b. All semiannual reports to LRAPA must include the following information, summarized from the information in Condition 43: [40 CFR 60.487(c)]
 - 44.b.i. Process unit identification. [40 CFR 60.487(c)(1)]

- 44.b.ii. For each month during the semiannual reporting period, [40 CFR 60.487(c)(2)]
 - 44.b.ii.1. Number of valves for which leaks were detected as described in Conditions 37 or 39.b, [40 CFR 60.487(c)(2)(i)]
 - 44.b.ii.2. Number of valves for which leaks were not repaired as required in Condition 39.b, [40 CFR 60.487(c)(2)(ii)]
 - 44.b.ii.3. Number of pumps for which leaks were detected as described in Conditions 37.b, 37.d.iv, or 37.d.v, [40 CFR 60.487(c)(2)(iii)]
 - 44.b.ii.4. Number of pumps for which leaks were not repaired as required in Conditions 37.c.i and 37.d.vi, [40 CFR 60.487(c)(2)(iv)]
 - 44.b.ii.5. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible. [40 CFR 60.487(c)(2)(vii)]
- 44.b.iii. Dates of process unit shutdowns which occurred within the semiannual reporting period. [40 CFR 60.487(c)(3)]
- 44.b.iv. Revisions to items reported according to 40 CFR 60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report. [40 CFR 60.487(c)(4)]
- 44.c. The permittee must report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to 40 CFR 60 subpart VV except that the permittee must notify LRAPA of the schedule for the initial performance tests at least 30 days before the initial performance tests. [40 CFR 60.487(e)]
- 44.d. The requirements of Conditions 44.a and 44.b remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of Conditions 44.a and 44.b provided that they comply with the requirements established by the State. [40 CFR 60.487(f)]

Emissions Unit Boiler-1 Specific Emission Limits and Standards

40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [LRAPA 46-535(3)(e)]

- 45. The permittee of an affected facility that combusts only natural gas, wood, fuels using fuel certification to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels must record and maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60.48c(g)(2)]
- 46. All records required under Condition 45 must be maintained by the permittee of the affected facility for a period of two years following the date of such record. [40 CFR 60.48c(i)]

Emissions Unit ST-1: Group 4 Storage Tanks and Containers (SM-9) Specific Emission Limits and Standards

40 CFR 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 [LRAPA 46-535(3)(r)]

ST-1: Group 4 SM-9 Subpart Kb Standard Requirements

47. The permittee of each storage vessel (SM-9) either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, must equip each storage vessel with one of the following: [40 CFR 60.112b(a)]
- 47.a. A fixed roof in combination with an internal floating roof meeting the following specifications: [40 CFR 60.112b(a)(1)]
- 47.a.i. The internal floating roof must rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof must be floating on the liquid surface at all times, except during initial fill and during those internals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and must be accomplished as rapidly as possible. [40 CFR 60.112b(a)(1)(i)]
- 47.a.ii. Each internal floating roof must be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: [40 CFR 60.112b(a)(1)(ii)]
- 47.a.ii.1. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank. [40 CFR 60.112b(a)(1)(ii)(A)]
- 47.a.ii.2. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. [40 CFR 60.112b(a)(1)(ii)(B)]
- 47.a.ii.3. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. [40 CFR 60.112b(a)(1)(ii)(C)]
- 47.a.iii. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. [40 CFR 60.112b(a)(1)(iii)]
- 47.a.iv. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid must be equipped with a gasket. Covers on each access hatch and automatic gauge float well must be bolted except when they are in use. [40 CFR 60.112b(a)(1)(iv)]
- 47.a.v. Automatic bleeder vents must be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112b(a)(1)(v)]

- 47.a.vi. Rim space vents must be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [40 CFR 60.112b(a)(1)(vi)]
- 47.a.vii. Each penetration of the internal floating roof for the purpose of sampling must be a sample well. The sample well must have a slit fabric cover that covers at least 90 percent of the opening. [40 CFR 60.112b(a)(1)(vii)]
- 47.a.viii. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof must have a flexible fabric sleeve seal or a gasketed sliding cover. [40 CFR 60.112b(a)(1)(viii)]
- 47.a.ix. Each penetration of the internal floating roof that allows for passage of a ladder must have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)]
- 48. The permittee's storage vessel (SM-9) is not subject to Condition 47 if the storage vessel is storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa. [40 CFR 60.112b(b)]

ST-1: Group 4 SM-9 Subpart Kb Testing and Procedures

- 49. After installing the control equipment required to meet Condition 47, the permittee must: [40 CFR 60.113b(a)]
 - 49.a. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the permittee must repair the items before filling the storage vessel. [40 CFR 60.113b(a)(1)]
 - 49.b. For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee must repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in Condition 49.b cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from LRAPA in the inspection report required in Condition 50.a.iii. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the permittee will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2)]
 - 49.c. For vessels equipped with a double-seal system as specified in Condition 47.a.ii.2. [40 CFR 60.113b(a)(3)]
 - 49.c.i. Visually inspect the vessel as specified in Condition 49.d at least every five (5) years; or [40 CFR 60.113b(a)(3)(i)]
 - 49.c.ii. Visually inspect the vessel as specified in Condition 49.b. [40 CFR 60.113b(a)(3)(ii)]
 - 49.d. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer

close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee must repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event must inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in Conditions 49.b and 49.c.ii and at intervals no greater than five (5) years in the case of vessels specified in Condition 49.c.i. [40 CFR 60.113b(a)(4)]

- 49.e. Notify LRAPA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by Condition 49.a and 49.d to afford LRAPA the opportunity to have an observer present. If the inspection required by Condition 49.d is not planned and the permittee could not have known about the inspection 30 days in advance or refilling the tank, the permittee must notify LRAPA at least seven (7) days prior to the refilling of the storage vessel. Notification must be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by LRAPA at least seven (7) days prior to the refilling. [40 CFR 60.113b(a)(5)]

ST-1: Group 4 SM-9 Subpart Kb Recordkeeping and Reporting Requirements

- 50. The permittee of each storage vessel as specified in Condition 47.a must keep records and furnish reports as required by Condition 50.a depending upon the control equipment installed to meet the requirements of Condition 47. The permittee must keep copies of all reports and records required by Condition 50 for at least two (2) years. [40 CFR 60.115b]
- 50.a. After installing control equipment in accordance with Condition 47.a (fixed roof and internal floating roof), the permittee must meet the following requirements. [40 CFR 60.115b(a)]
 - 50.a.i. Furnish LRAPA with a report that describes the control equipment and certifies that the control equipment meets the specifications of Conditions 47.a and 49.a. This report must be an attachment to the notification required by 40 CFR 60.7(a)(3). [40 CFR 60.115b(a)(1)]
 - 50.a.ii. Keep a record of each inspection performed as required by Conditions 49.a, 49.b, 49.c, and 49.d. Each record must identify the storage vessel on which the inspection was performed and must contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)]
 - 50.a.iii. If any of the conditions described in Condition 49.b are detected during the annual visual inspection required by Condition 49.b, a report must be furnished to LRAPA within 30 days of the inspection. Each report must identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. [40 CFR 60.115b(a)(3)]
 - 50.a.iv. After each inspection required by Condition 49.c that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Condition 49.c.ii, a report must be furnished to LRAPA within 30 days of the inspection. The report must identify the storage vessel and the reason it did not meet the specifications of Condition 47.a or 49.c and list each repair made. [40 CFR 60.115b(a)(2)]

ST-1: Group 4 SM-9 Subpart Kb Monitoring of Operations

- 51. The permittee must keep copies of all records required by Conditions 51 through 56, except for the record required Condition 52, for at least two (2) years. The record required by Condition 52

will be kept for the life of the source. [40 CFR 60.116b(a)]

52. The permittee of each storage vessel as specified in Condition 47 must keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(b)]
53. Except as provided in Condition 56, the permittee of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa must maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. [40 CFR 60.116b(c)]
54. The permittee of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa must notify LRAPA within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40 CFR 60.116b(d)]
55. The permittee may use available data on the storage temperature to determine the maximum true vapor pressure as determined using Condition 55.a and 55.b. [40 CFR 60.116b(e)]
 - 55.a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)]
 - 55.b. For other liquids, the vapor pressure: [40 CFR 60.116b(e)(3)(i) through (iv)]
 - 55.b.i. May be obtained from standard reference texts, or
 - 55.b.ii. Determined by ASTM D2879-83, 96, or 97 (incorporated by reference – see 40 CFR 60.17); or
 - 55.b.iii. Measured by an appropriate method approved by LRAPA; or
 - 55.b.iv. Calculated by an appropriate method approved by LRAPA.
56. The permittee of each vessel storing a waste mixture of indeterminate or variable composition is subject to the following requirements: [40 CFR 60.116b(f)]
 - 56.a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in Condition 55. [40 CFR 60.116b(f)(1)]
 - 56.b. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in Condition 47, an initial physical test of the vapor pressure is required; and a physical test at least once every six (6) months thereafter is required as determined by the following methods: [40 CFR 60.116b(f)(2)]
 - 56.b.i. ASTM D2879-83, 96, or 97 (incorporated by reference – see 40 CFR 60.17); or
 - 56.b.ii. ASTM D323-82 or 94 (incorporated by reference – see 40 CFR 60.17); or
 - 56.b.iii. As measured by an appropriate method as approved by LRAPA.

Categorically Insignificant Activity: CIA-1 – Diesel-Fired 500 kW Emergency Generator

40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [LRAPA 44-150(5)(ffff)]

57. If the permittee owns or operates an existing stationary RICE located at an area source of HAP emissions, the permittee must comply with the requirements in Table 2d of 40 CFR 63 subpart ZZZZ as listed below: [40 CFR 63.6603(a)]
 - 57.a. Change oil and filter every 500 hours of operation or annually, whichever comes first, or utilize an oil analysis program pursuant to Condition 59.d to extend the specified oil change requirement; [40 CFR 63.6603(a) and 40 CFR 63 subpart ZZZZ, Table 2d]
 - 57.b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and [40 CFR 63.6603(a) and 40 CFR 63 subpart ZZZZ, Table 2d]
 - 57.c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6603(a) and 40 CFR 63 subpart ZZZZ, Table 2d]
58. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Conditions 57.a through 57.c, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63.6603(a) and 40 CFR 63 Subpart ZZZZ, Table 2d]
59. The permittee's monitoring, installation, collection, operation, and maintenance requirements include the following: [40 CFR 63.6625]
 - 59.a. The permittee must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)(3)]
 - 59.b. The permittee must install a non-resettable hour meter on the existing emergency stationary RICE located at an area source of HAP emissions if one is not already installed. [40 CFR 63.6625(f)]
 - 59.c. During periods of startup the permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]
 - 59.d. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 57. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 57. The analysis program must at a minimum analyze the following three (3) parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: [40 CFR 63.6625(i)]
 - 59.d.i. Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
 - 59.d.ii. Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or

59.d.iii. Percent water content (by volume) is greater than 0.5.

If all of the condemning limits in Conditions 59.d.i through 59.d.iii are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]

60. The permittee's general requirements for complying with 40 CFR 63 subpart ZZZZ are the following: [40 CFR 63.6605]
- 60.a. The permittee must be in compliance with the emission limitations and operating limitations in this subpart that apply to the permittee at all times. [40 CFR 63.6605(a)]
- 60.b. The permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to LRAPA which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]
61. The permittee must demonstrate continuous compliance with the emission limitations and operating limitations as follows: [40 CFR 63.6640]
- 61.a. The permittee must demonstrate continuous compliance with each operating limitation in Table 2d to 40 CFR 63 subpart ZZZZ that apply to the permittee according to the methods specified in Table 6 of 40 CFR 63 subpart ZZZZ. [LRAPA 44-150(5)(ffff) and 40 CFR 63.6640(a)]
- 61.b. The permittee must operate the emergency stationary RICE according to the requirements in Conditions 61.b.i through 61.b.ii. In order for the engine to be considered an emergency stationary RICE under 40 CFR 63 subpart ZZZZ, any operation other than emergency operation, maintenance and testing as described in Conditions 61.b.i through 61.b.ii, is prohibited. If the permittee does not operate the engine according to the requirements in Conditions 61.b.i through 61.b.ii, the engine will not be considered an emergency engine under 40 CFR 63 subpart ZZZZ and must meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]
- 61.b.i. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.440(f)(1)]
- 61.b.ii. The permittee may operate the emergency stationary RICE for any combination of the purposes specified in Condition 61.b.ii.1 for a maximum of 100 hours per calendar year. [40 CFR 63.6640(f)(2)]
- 61.b.ii.1. Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition LRAPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records

indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2)(i)]

62. The permittee must keep the following records: [40 CFR 63.6655]
- 62.a. If the permittee must comply with operating limitations, the permittee must keep the records described in Condition 62.a.i through 62.a.iii: [40 CFR 63.6655(a)]
 - 62.a.i. A copy of each notification and report that the permittee submitted to comply with 40 CFR 63 subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
 - 62.a.ii. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment). [40 CFR 63.6655(a)(2)]
 - 62.a.iii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
 - 62.b. The permittee must keep the records required in Table 6 of 40 CFR 63 subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies to them. [40 CFR 63.6655(d)]
 - 62.c. The permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE according to their own maintenance plan. [40 CFR 63.6655(e)]
 - 62.d. The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 63.6655(f)]
63. The permittee must keep their records in the following form and length of time: [40 CFR 63.6660]
- 63.a. The permittee's records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a)]
 - 63.b. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660(b)]
 - 63.c. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(c)]

Emission Units SF-1, SF-2 and SF-3 Testing Requirements

64. The permittee must conduct testing within 12 months of issuance of this permit to verify the emission factors listed in Condition 5.d, except as allowed by this condition. The testing must also verify compliance with the NSPS subpart III emission limit in Condition 25 as specified in Condition 27 and 28 for SF-3: Group 3. For the emissions factors for EU SF-1: Group 1, the permittee must test the "SF-1 Formaldehyde Process Off-line" scenarios within 12 months of issuance of this permit and test the "SF-1 Formaldehyde Process On-line" scenarios within six (6) months of the restart of the EU SF-1 Formaldehyde Process. For the emissions factors for EU SF-2, the permittee must test the "SF-2 On-line, TGB On-line" and "SF-2 On-line, TGB Off-line" within six (6) months of the restart of the EU SF-2 Process. The emission points and pollutants required to be tested are listed in the following table: [LRAPA 35-0120, 35-0140, and 40 CFR 60.8(b)]

Monitoring Point	Pollutant
SF-1: Group 1 RTO – Inlet and Exhaust	Total VOC
	Formaldehyde
	Methanol
	DME
	Phenol
	CO
SF-2: Group 2 Tail Gas Boiler – Inlet and Exhaust	Total VOC
	Formaldehyde
	Methanol
	DME
	CO
SF-3: Group 3 Catalytic Incinerator – Inlet and Exhaust	Total VOC
	Formaldehyde
	Methanol
	DME
	CO

- 64.a. The following test methods must be used for the corresponding pollutant emissions, unless another test method is approved in writing by LRAPA: [LRAPA 35-0120(1)]

Pollutant	Test Method
Total VOC	EPA Method 25A
Formaldehyde	EPA Method 323 or EPA Method 320
Methanol	EPA Method 18 or EPA Method 308
DME	EPA Method 18
Phenol	EPA Method 18
CO	EPA Method 10

- 64.b. Formaldehyde, methanol, phenol and DME testing (where required) must be measured separately and concurrently with total VOC. Total VOC must be determined by the summation of mass emissions results from EPA Method 25A (as propane), methanol,

formaldehyde, phenol, and DME, where applicable. [LRAPA 35-0120(1)]

- 64.c. The following parameters must be monitored and recorded during the source test, along with any other operating parameters required by LRAPA as part of the source test plan approval: [LRAPA 35-0120(1)]
 - 64.c.i. Visible emissions as measured by EPA Method 9 for a period of at least six (6) minutes during or within 30 minutes before or after each test run for each emission unit and operating scenario being tested.
 - 64.c.ii. The following process parameters must be recorded for EU SF-1: Group 1 RTO:
 - 64.c.ii.1. Average RTO bed temperature for each run;
 - 64.c.ii.2. Average formaldehyde production rate; and
 - 64.c.ii.3. Emission results in pounds pollutant per hour of operation of RTO.
 - 64.c.iii. The following process parameters must be recorded for EU SF-2: Group 2 Tail Gas Boiler:
 - 64.c.iii.1. Tail gas feed rate;
 - 64.c.iii.2. Exhaust Stack Temperature;
 - 64.c.iii.3. Residual oxygen content;
 - 64.c.iii.4. Steaming rate;
 - 64.c.iii.5. Total hydrocarbon in tail gas (ppm as propane);
 - 64.c.iii.6. Average formaldehyde production rate; and
 - 64.c.iii.7. Emission results in pounds pollutant per hour of operation of Tail Gas Boiler.
 - 64.c.iv. The following process parameters must be recorded for SF-3: Group 3 Catalytic Incinerator:
 - 64.c.iv.1. Temperature immediately before and after the catalyst bed;
 - 64.c.iv.2. Residual oxygen content;
 - 64.c.iv.3. Average formaldehyde production rate;
 - 64.c.iv.4. Emission results in pounds pollutant per hour of operation of Catalytic Incinerator; and
 - 64.c.iv.5. Vent stream flow to the catalytic incinerator as per Condition 26.b.
- 65. Unless otherwise specified in this permit, the permittee must conduct all testing in accordance with the Oregon DEQ Source Sampling Manual. [LRAPA 35-0120 and 35-0140]
 - 65.a. Unless otherwise specified by a state or federal regulation, the permittee must submit a source test plan to LRAPA at least 30 days prior to the date of the test. The test plan must be prepared in accordance with the Oregon DEQ Source Sampling Manual and address any planned variations or alternatives to the prescribed test method. The permittee should be aware that if significant variations are requested, LRAPA may require more than 45 days to grant approval and may require EPA approval in addition to approval by LRAPA.
 - 65.b. Only regular operating staff may adjust the processes or emission control device parameters during a compliance source test and within two (2) hours prior to the tests. Any operating adjustments made during a compliance source test, which are a result of consultation during the tests with source testing personnel, equipment vendors, or consultants, may render the source test invalid.

- 65.c. Unless other specified by permit condition or LRAPA approved source test plan, all compliance source tests must be performed as follows:
- 65.c.i. At least 90% of the design capacity for new or modified equipment;
 - 65.c.ii. At least 90% of the normal maximum operating rate for existing equipment. For the purposes of this permit, the normal maximum operating rate is defined as the 90th percentile of the average hourly operating rates during a 12-month period immediately preceding the source test. Data supporting the normal maximum operating rate must be included with the source test report.
- 65.d. Source test reports prepared in accordance with the Oregon DEQ Source Sampling Manual must be submitted to LRAPA within 30 days of completing any required source test, unless a different time period is approved in the source test plan submitted prior to the source test.

Monitoring and Recordkeeping Requirements

66. The permittee must monitor and maintain records for a period of at least five (5) years from the date of entry of the following information: [LRAPA 34-016(1)&(5) and 42-0080(3)]

Activity	Units	Minimum Recording Frequency
PSEL Recordkeeping		
Amount of formaldehyde produced	Pounds	Monthly
Hours of operation identifying the operating status of EU SF-1, EU SF-2 and EU SF-3 and the associated emissions control device operational status	Hours	Daily
Amount of natural gas burned in EU Boiler-1	Cubic feet	Monthly
Facility-wide natural gas usage	Cubic feet	Semi-annually
Fugitive emission survey logs	NA	Monthly
Operation and Maintenance Plans	NA	Maintain the current version on-site
Emission Control Device Recordkeeping		
Temperature excursions in the destruction bed of EU SF-1 RTO below 1,400°F (760°C)	°F or °C	Hourly
Temperature excursions in the exhaust gas from EU SF-2 Tail Gas Boiler below 125°C (257°F)	°F or °C	Hourly
Temperature records for EU SF-3 Catalytic Incinerator as required per Condition 30	°F or °C	Hourly
40 CFR 63 Subpart 4Z Recordkeeping		
The date and time of operation in hours of CIA-1	Date, Hours of operation	Each occurrence
Reason for operation of CIA-1	NA	Each occurrence

Activity	Units	Minimum Recording Frequency
The total hours that CIA-1 operates for emergency reasons in a calendar year	Hours	Monthly
The total hours that CIA-1 operates for non-emergency reasons in a calendar year	Hours	Monthly
Records of actions taken during periods of malfunction to minimize emissions	NA	Each occurrence
Records of inspections and maintenance performed according to the manufacturer's or the permittee's maintenance plan	NA	Each occurrence

Reporting Requirements

67. The permittee must submit to LRAPA a semi-annual report that includes the following information: [LRAPA 34-016(2) and 42-0080(5)]

Report	Reporting Period	Due Date
Annual emissions as calculated according to Condition 5, including the supporting process parameter and emission factor information.	Semiannual	February 15 th & August 15 th
EU SF-3: Group 3 40 CFR 60 subpart III reporting required per Condition 33.	Semiannual	February 15 th & August 15 th
EU SF-3: Group 3 40 CFR 60 subpart VV reporting required per Condition 44.	Semiannual	February 15 th & August 15 th
A revised Equipment and Emission Point Information list for EU FUG-1 (fugitive emission components) when new devices are added at the facility.	Semiannual	February 15 th & August 15 th
The upset log information required by Condition G13, if required by G13.	Semiannual	February 15 th & August 15 th
GHG Report, if required by Condition 68.	Annual	March 31

68. The permittee must register and report in compliance with Chapter 340, Division 215 of the Oregon Administrative Rules, if the source's direct greenhouse gas emissions meet or exceed 2,500 metric tons CO₂e during the previous year. Once a source's direct greenhouse gas emissions meet or exceed 2,500 metric tons CO₂e during a year, the permittee must annually register and report in each subsequent year, regardless of the amount of the source's direct GHG emissions in future years, except as provided in OAR 340-215-0032 and OAR 340-215-0034. Air contamination sources required to register and report under OAR 340-215-0030(2) must register and submit annual emissions data reports to LRAPA under OAR 340-215-0044 by the due date for the annual report for non-greenhouse gas emissions specified in Condition 67, or by March 31 of each year, whichever is later. [LRAPA 34-016, OAR 340-215-0030(2) and 340-340-215-0046(1)(a)]
69. Unless otherwise specified, all reports, test results, notifications, etc., required by the above terms and conditions must be reported to the following office:

Lane Regional Air Protection Agency
1010 Main Street
Springfield, Oregon 97477
(541) 736-1056

Outdoor Burning

70. Commercial and industrial outdoor burning is prohibited inside the Eugene and Springfield Urban Growth boundaries. Commercial and industrial outdoor burning is prohibited elsewhere, unless authorized pursuant to LRAPA 47-020. [LRAPA 47-015(4)&(5)]

Fee Schedule

71. In accordance with adopted regulations, the permittee will be invoiced for the annual permit fees on October 1st, with fees due December 1st of each year. [LRAPA 37-8020 Table 2]

KE/JJW/CMW
10/11/2023

LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT

ACDP	Air Contaminant Discharge Permit	OAR	Oregon Administrative Rules
ASTM	American Society for Testing and Materials	ORS	Oregon Revised Statutes
AQMA	Air Quality Maintenance Area	O&M	operation and maintenance
calendar year	The 12-month period beginning January 1st and ending December 31st	Pb	lead
cf	Cubic Feet	PCD	pollution control device
CFR	Code of Federal Regulations	PM	particulate matter
CI	Catalytic Incinerator	PM ₁₀	particulate matter less than 10 microns in size
CO	Carbon Monoxide	PM _{2.5}	Particulate matter less than 2.5 microns in size
CO ₂ e	Carbon dioxide equivalent	ppm	part per million
DEQ	Oregon Department of Environmental Quality	PRF	Phenol Resorcinol Formaldehyde Resin
DME	Dimethyl Ether	PSD	Prevention of Significant Deterioration
dscf	dry standard cubic foot	PSEL	Plant Site Emission Limit
EPA	US Environmental Protection Agency	PTE	Potential to Emit
FCAA	Federal Clean Air Act	RACT	Reasonably Available Control Technology
ft ²	square foot	RF	Resorcinol Formaldehyde Resin
GHG	Greenhouse gases	RICE	Reciprocating Internal Combustion Engine
gr/dscf	grains per dry standard cubic foot	scf	standard cubic foot
HAP	Hazardous Air Pollutant as defined by LRAPA Title 44	SER	Significant Emission Rate
HCHO	Formaldehyde	SIC	Standard Industrial Code
I&M	inspection and maintenance	SIP	State Implementation Plan
Lb	pound(s)	SO ₂	sulfur dioxide
LRAPA	Lane Regional Air Protection Agency	Special Control Area	as defined in LRAPA Title 29
MeOH	Methanol	TGB	Tail Gas Boiler
MM	million	TOC	Total organic compounds
MMBtu	million British thermal units	TRE	Total Resource Effectiveness
NA	not applicable	UF	Urea Formaldehyde Resin
NESHAP	National Emissions Standards for Hazardous Air Pollutants	UFC	Urea Formaldehyde Concentrate (also known as UF-85)
NO _x	nitrogen oxides	VE	visible emissions
NSPS	New Source Performance Standard	VOC	volatile organic compound
NSR	New Source Review	VOL	Volatile organic liquid
O ₂	oxygen	year	A period consisting of any 12-consecutive calendar months

Definition: Modified EPA Method 9 (EPA Method 203B): For this permit, “Modified EPA Method 9” is defined as follows: Opacity must be measured in accordance with EPA Method 9 using the data

reduction procedures in EPA Method 203B. For all standards, the minimum observation period must be six (6) minutes, though longer periods may be required by a specific rule or permit condition. Aggregate times (e.g., three (3) minutes in any one (1) hour) consist of the total duration of all readings during the observation period that are equal to or greater than the opacity percentage in the standard, whether or not the readings are consecutive. Each EPA Method 9 reading represents 15 seconds of time. See also the definition of "Opacity" in LRAPA title 12.

GENERAL PERMIT CONDITIONS

General Conditions and Disclaimers

- G1. A copy of the permit application and this Air Contaminant Discharge Permit (ACDP) must be available on site for inspection upon request. [LRAPA 37-0020(3)]
- G2. The permittee must allow the Director or his/her authorized representatives access to the plant site and pertinent records at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant discharge records and otherwise conducting necessary functions related to this permit in accordance with ORS 468.095. [LRAPA 13-020(1)(h)]
- G3. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

Performance Standards and Emission Limits

- G4. The permittee must not cause or permit the deposition of any particulate matter which is larger than 250 microns in size at sufficient duration and quantity, as to create an observable deposition upon the real property of another person. [LRAPA 32-055]
- G5. The permittee must not discharge from any source whatsoever such quantities of air contamination which cause injury or damage to any persons, the public, business or property. Such determination to be made by LRAPA. [LRAPA 32-090(1)]
- G6. The permittee must not cause or permit emission of water vapor if the water vapor causes or tends to cause detriment to the health, safety or welfare of any person or causes, or tends to cause damage to property or business. [LRAPA 32-090(2)]
- G7. The permittee must not willfully cause or permit the installation or use of any device or use of any means which, without resulting in a reduction in the total amount of air contaminants emitted, conceals emissions of air contaminants which would otherwise violate LRAPA rules. [LRAPA 32-050(1)]
- G8. The permittee must not cause or permit the installation or use of any device or use of any means designed to mask the emissions of an air contaminant which causes or tends to cause detriment to health, safety or welfare of any person. [LRAPA 32-050(2)]
- G9. The permittee must not allow any materials to be handled, transported, or stored; or a building, its appurtenances or road(s) to be used, constructed, altered, repaired, or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from being airborne. [LRAPA 48-015(1)]
- G10. The permittee may not cause or allow air contaminants from any source subject to regulation by LRAPA to cause nuisance. [LRAPA 49-010(1)]

Excess Emissions: General Policy

- G11. Emissions of air contaminants in excess of applicable standards or permit conditions are unauthorized and are subject to enforcement action, pursuant to LRAPA 36-010 and 36-030. These rules apply to any permittee operating a source which emits air contaminants in violation of any applicable air quality rule or permit condition, including but not limited to excess emissions resulting from the breakdown of air pollution control devices or operating equipment, process

upset, startup, shutdown, or scheduled maintenance. Sources that do not emit air contaminants in excess of any applicable rule or permit condition are not subject to the recordkeeping and reporting requirements in LRAPA Title 36. Emissions in excess of applicable standards are not excess emissions if the standard is in an NSPS or NESHAP and the NSPS or NESHAP exempts startups, shutdowns and malfunctions as defined in the applicable NSPS or NESHAP.
[LRAPA 36-001(1)]

Excess Emissions: Notification and Record-keeping

- G12. For all other excess emissions not addressed in LRAPA Sections 36-010, 36-015, or 36-040, the following requirements apply: [LRAPA 36-020(1)]
- a. The owner or operator, of a small source, as defined by LRAPA 36-005(7), need not notify LRAPA of excess emissions events immediately unless otherwise required by permit condition, written notice by LRAPA, or if the excess emission is of a nature that could endanger public health.
 - b. Notification must be made to the LRAPA office. The current LRAPA telephone number during regular business hours (8 a.m. - 5 p.m., M-F) is (541) 736-1056. During nonbusiness hours, weekends, or holidays, the permittee must immediately notify LRAPA by calling the LRAPA Upset/Complaint Line. The current number is (541) 726-1930.
 - c. Follow-up reporting, if required by LRAPA, must contain all information required by Condition G15.
- G13. At each annual reporting period specified in this permit, or sooner if required by LRAPA, the permittee must submit a copy of the upset log entries for the reporting period, as required by Condition G15. [LRAPA 36-025(4)(a)]
- G14. Any excess emissions which could endanger public health or safety must immediately be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311.
- G15. The permittee must keep an upset log of all planned and unplanned excess emissions. The upset log must include the following: [LRAPA 36-025(3) and 36-030(1)]
- a. date and time each event was reported to LRAPA;
 - b. whether the process handling equipment and the air pollution control equipment were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - c. whether repairs or corrections were made in an expeditious manner when the permittee knew or should have known that emission limits were being or were likely to be exceeded;
 - d. whether the event was one in a recurring pattern of incidents which indicate inadequate design, operation, or maintenance; and
 - e. final resolution of the cause of the excess emissions.

Upset logs must be kept by the permittee for five (5) calendar years. [LRAPA 36-025(3)]

Excess Emissions: Scheduled Maintenance

- G16. If the permittee anticipates that scheduled maintenance of air contaminant sources or air pollution control devices may result in excess emissions, the permittee must obtain prior LRAPA authorization of procedures that will be used to minimize excess emissions. Application for approval of procedures associated with the scheduled maintenance must be submitted and

received by LRAPA in writing at least seventy-two (72) hours prior to the event. The application must include the following: [LRAPA 36-015(1)]

- a. reasons explaining the need for maintenance, including but not limited to: why the maintenance activity is necessary; why it would be impractical to shut down the source operation during the maintenance activity; if applicable, why air pollution control devices must be by-passed or operated at reduced efficiency during the maintenance activity; and why the excess emissions could not be avoided through better scheduling for maintenance or through better operation and maintenance practices;
 - b. identification of the specific production or emission control device or system to be maintained;
 - c. identification of the nature of the air contaminants likely to be emitted during the maintenance period, and the estimated amount and duration of the excess emissions, including measures such as the use of overtime labor and contract services and equipment that will be taken to minimize the length of the maintenance period; and
 - d. identification of specific procedures to be followed which will minimize excess emissions at all times during the scheduled maintenance.
- G17. No scheduled maintenance associated with the approved procedures in Condition G16 that is likely to result in excess emissions may occur during any period in which an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency has been declared, or during an announced yellow or red woodstove advisory period, in areas determined by LRAPA as PM_{2.5} or PM₁₀ nonattainment areas. [LRAPA 36-015(6)]
- G18. In cases where LRAPA has not received notification of scheduled maintenance that is likely to cause excess emissions within the required seventy-two (72) hours prior to the event, or where such approval has not been waived pursuant to LRAPA 36-015(3), the permittee must immediately notify LRAPA by telephone of the situation, and must be subject to the requirements of Conditions G12 and G13. [LRAPA 36-015(7)]

Air Pollution Emergencies

- G19. The permittee must, upon declaration of an air pollution alert, air pollution warning, or air pollution emergency, take all emission reduction measures specified in Tables 1, 2, and 3 of LRAPA Title 51. Permittees responsible for a source of air contamination within a Priority I AQCR must, upon declaration of an episode condition affecting the locality of the air contamination source, take all appropriate actions specified in the applicable table and must take all appropriate actions specified in an LRAPA-approved preplanned abatement strategy for such condition which has been submitted and is on file with LRAPA. [LRAPA 51-015]

Notification of Construction/Modification

- G20. The permittee must notify LRAPA in writing using an LRAPA "Notice of Intent to Construct" form, or other permit application forms and obtain approval in accordance with LRAPA 34-010 and 34-034 through 34-038 before:
- a. constructing, installing or establishing a new stationary source that will cause an increase in regulated pollutant emissions;
 - b. making any physical change or change in the operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
 - c. constructing or modifying any pollution control equipment.

Notification of Name Change

- G21. The permittee must notify LRAPA in writing, using an LRAPA Application for Administrative Amendment to ACDP form, within 60 days after legal change of the registered name of the company with the Corporation Division of the State of Oregon. [LRAPA 37-0030(4)]

Applicable administrative fees must be submitted with an application for the name change.

Permit Renewal

- G22. Application for renewal of this permit must be submitted not less than 120 days prior to the permit expiration date for Simple ACDPs, and 180 days prior to the permit expiration date for Standard ACDP. [LRAPA 37-0040(2)(b)]
- G23. A source may not be operated after the expiration date of a permit, unless any of the following occur prior to the expiration date of the permit: [LRAPA 37-0082(1)(a)]
- a. A timely and complete application for renewal or for an LRAPA Title V Operating Permit has been submitted; or
 - b. Another type of permit, ACDP or Title V, has been issued authorizing operation of the source.
- G24. For a source operating under an ACDP or LRAPA Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially. [LRAPA 37-0082(1)(c)]
- G25. Any permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. [LRAPA 37-0040(4)]

Termination Conditions

- G26. This permit will be automatically terminated upon: [LRAPA 37-0082(2)]
- a. Issuance of a renewal or new ACDP for the same activity or operation;
 - b. Written request of the permittee, if LRAPA determines that a permit is no longer required;
 - c. Failure to submit a timely application for permit renewal. Termination is effective on the permit expiration date; or;
 - d. Failure to pay annual fees within 90 days of invoice by LRAPA, unless prior arrangements for payment have been approved in writing by LRAPA.
- G27. If LRAPA determines that a permittee is in noncompliance with the terms of the permit, submitted false information in the application or other required documentation, or is in violation of any applicable rule or statute, LRAPA may revoke the permit. LRAPA will provide notice of the intent to revoke the permit to the permittee under LRAPA Title 31. The notice will include the reasons why the permit will be revoked, and include an opportunity for the permittee to request a contested case hearing prior to the revocation. A written request for hearing must be received by LRAPA within 60 days from service of the notice on the permittee, and must state the grounds of the request. The hearing will be conducted as a contested case hearing under ORS 183.413 through 183.470 and LRAPA Title 14. The permit will continue in effect until the 60th day after service of the notice on the permittee, if the permittee does not timely request a hearing, or until a final order is issued if the permittee timely requests a hearing. [LRAPA 37-0082(4)(a)]
- G28. A permit automatically terminated under LRAPA 37-0082(2)(b) through (2)(d) may only be reinstated by the permittee by applying for a new permit. The permittee must also pay the

applicable new source permit application fees in this title unless the owner or operator submits the renewal application within three months of the permit expiration date. [LRAPA 37-0082(3)]

- G29. If LRAPA finds there is a serious danger to the public health, safety or the environment caused by a permittee's activities, LRAPA may immediately revoke or refuse to renew the permit without prior notice or opportunity for a hearing. If no advance notice is provided, notification will be provided to the permittee as soon as possible as provided under LRAPA Title 31. The notification will set forth the specific reasons for the revocation or refusal to renew and will provide an opportunity for the permittee to request a contested case hearing for review of the revocation or refusal to renew. A permittee's written request for hearing must be received by LRAPA within 90 days of service of the notice on the permittee and must state the grounds for the request. The hearing will be conducted as a contested case hearing under ORS 183.413 through 183.470 and LRAPA Title 14. The revocation or refusal to renew becomes final without further action by LRAPA if a request for a hearing is not received within the 90 days. If a request for a hearing is timely received, the revocation or refusal to renew will remain in place until issuance of a final order. [LRAPA 37-0082(4)(b)]
- G30. Any hearing requested must be conducted pursuant to the rules of LRAPA. [LRAPA Title 14]

Asbestos

- G31. The permittee must comply with the asbestos abatement requirements in LRAPA Title 43 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance. [LRAPA Title 43]

[Revised 1/12/18]