Lane Regional Air Protection Agency
Standard Air Contaminant Discharge Permit

Review Report

McFarland Cascade Pole & Lumber Company **Permit No. 205108**
90049 Highway 99 North
Eugene, Oregon 97402
Website: http://www.ldm.com

Source Information:

Primary SIC	2491 – Wood Preserving
NAICS	321114 – Wood Preservation
Source Categories	B. 73 – Wood preserving C. 3 – Source electing to

(LRAPA title 37, Table 1)	maintain the netting basis
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	Y
Emission Credits	N
Compliance Schedule	N
Source Test [date(s)]	N

COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	February 15
Semi-Annual Report (due date)	N
GHG Report (due date)	March 31
Monthly Report (due date)	N
Quarterly Report (due date)	N

Excess Emissions Report	Y
Other Reports (due date) • NSPS Fuel Oil Report	Postmarked by January 30, July 30

Air Programs

NSPS (list subparts)	Dc
NESHAP (list subparts)	QQQQQQ
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	N
SM-80	N
Title V	N
Part 68 Risk Management	N
Major FHAP Source	N
Federal Major Source	N
NA New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	N
>20 Megawatts	N

Permittee Identification

1. McFarland Cascade Pole & Lumber Company ("the facility") operates a wood treatment facility at 90049 Highway 99 North, Eugene, Oregon.

General Background

2. This facility treats wood products under pressure in closed cylindrical vessels called retorts. The treatment chemicals include DCOI (Dichloro-octyl-isothiazonlinone), copper napthenate (CuNap), and a carrier oil (high flash No. 2 diesel fuel) for the wood preservatives. Current air emissions result from the four (4) retorts, the existing 14.7 MMBtu boiler, and fugitive emissions sources. This facility no longer uses pentachlorophenol. The facility has been in operation since 1953.

Reasons for Permit Actions and Fee Basis

3. The facility is authorized to install a new natural gas-fired boiler with a maximum heat input rate of 16.28 MMBtu per hour under NC-205108-A23 issued on 8/23/2023. The new boiler will be the primary boiler for the facility and the existing 14.7 MMBtu per hour boiler will become a backup boiler.

4. In addition, the facility requested the existing 14.7 MMBtu per hour boiler be reclassed under 40 CFR 63 subpart JJJJJJ (6J) as meeting the definition of a gas-fired boiler. As such, the PTE of this boiler will be recalculated assuming only 48 hours of fuel oil use and requirements related to the use of fuel oil under 40 CFR 63 subpart 6J will be removed from the permit. No other regulatory changes result from the reclass of the boiler.

5. As part of this modification, the facility PSELs will be changed from Generic PSELs to site specific PSELs based on potential-to-emit (PTE). As of March 1, 2023, DEQ removed the ability to use Generic PSELs from their regulations. By state statute, LRAPA cannot be less restrictive than DEQ. The source specific PSELs in the draft permit are based on the boiler calculations provided as part of the modification application and the emission calculations in the review report for the Standard ACDP renewal issued on 11/10/2020.

6. LRAPA is also performing an agency-initiated modification to correct or remove the following requirements:
    - 6.a. The facility only uses DCOI and CuNap for wood treatment. The existing conditions in the permit related to 40 CFR 63 – National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources only apply to treatment processes with any wood preservative containing chromium, arsenic, dioxins, or methylene chloride. As such, these conditions will be removed.
    - 6.b. LRAPA has added compliance demonstration and recordkeeping for all SIP and non-SIP conditions, as applicable.

Attainment Status

7. The facility is located inside the Eugene-Springfield Air Quality Management Area. The facility is located in an area that has been designated attainment/unclassified for $PM_{2.5}$, ozone (VOC), NO_2, SO_2, and Pb and a maintenance area for CO and PM_{10}. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness area.

Permitting History

8. LRAPA has reviewed and issued the following permitting actions to this facility:

Date Approved	Permit Action Type	Description
04/01/1990	ACDP	Initial air permit.
11/07/1995	NC-205108-A95	Construction of third retort and 14.7 MMBtu/hr boiler.
02/02/1996	NC-205108-B95	Construction of fourth retort.
12/18/1996	ACDP	Incorporate two new retorts and 14.7 MMBtu/hr boiler.
04/01/1998	ACDP	Renewal.
04/01/2003	ACDP	Renewal.
01/29/2004	ACDP Addendum No. 1	Name change.
05/10/2004	NC-205108-A04	Installation of a new fiber bed filter for the vacuum pump exhaust.
09/24/2004	ACDP Addendum No. 2	Addition of the new fiber bed filter for the vacuum pump exhaust.
05/23/2006	NC-205108-A06	Installation of vapor recovery hoods above the retort door openings.
11/23/2009	ACDP	Renewal.
12/16/2009	NC-205108-A09	Installation of a second fiber bed filter for retort door openings.
03/17/2015	Standard ACDP	Renewal.
08/22/2019	NC-205108-A19	Authorize use of a rented 12.6 MMBtu/hr boiler while the 14.7 MMBtu/hr boiler is repaired.
11/10/2020	Standard ACDP	Renewal.
11/09/2021	NC-205108-B21	Authorize use of a temporary diesel-fired 27 kW generator for power while modifying the wood treatment drip pad.
04/13/2022	NC-205108-A22	Authorize use of a rented 14.6 MMBtu/hr boiler while the 14.7 MMBtu/hr boiler is repaired.
08/23/2023	NC-205108-A23	Construction of a new 16.28 MMBtu/hr natural gas-fired boiler.
Upon Issuance	Standard ACDP	Incorporate new 16.28 MMBtu/hr natural gas-fired boiler; set PSELs to PTE; reset 14.7 MMBtu/hr boiler to gas-fired boiler.

Emission Unit Descriptions

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

Emission Unit ID	Description	Pollution Control Device (PCD ID)	Installed / Last Modified
Significant Emission Units			
EU-1	Oil-based Wood Preserving including: • 4 Retorts • Storage and Work Tanks • Cooling Tower • Fugitive Sources	None	Retort 1 - 1994 Retort 2 - 1994 Retort 3 - 1996 Retort 4 - 1996
B-1	Boiler (14.7 MMBtu/hr) – Gas-Fired with No. 2 Fuel Oil Backup	None	1995
B-2	Boiler (16.8 MMBtu/hr) – Gas-Fired Only	None	2023

10. Oil-based Wood Preserving

The facility operates a wood preserving process. In wood preserving, wood is treated under pressure in a closed cylindrical vessel retort by forcing chemical preservatives deep in the cells of the wood. This facility operates four (4) retorts. As part of the preservation process, the facility operates chemical storage tanks, work tanks, and a process water cooling tower. The facility currently uses DCOI (Dichloro-octyl-isothiazonlinone), copper napthenate (CuNap), and a carrier oil (high flash No. 2 diesel fuel).for wood preservatives. The facility no longer uses pentachlorophenol. VOC emissions for this process were provided by the facility in support of the review report for the Standard ACDP renewal issued on 11/10/2020. Some parts of this process are exhausted through fiber bed filters that reduce condensable and particulate matter emissions.

11. 14.7 MMBtu/hr Natural Gas Boiler with Fuel Oil Backup (B-1)
    The facility currently uses one (1) 14.7 MMBtu/hr boiler (B-1) installed in 1996 to provide steam for the wood treatment operations. The criteria pollutant emissions from this source are based on emission factors derived from DEQ AQ-EF05 – Emission Factors Gas Fired Boilers, DEQ AQ-EF04 – Emission Factors Oil Fired Boilers, and US EPA 40 CFR 98, Tables C-1 and C-2. The federal HAP or CAO TAC emissions from this source are based on emission factors from DEQ's 2020 Air Toxics Emission Inventory Combustion Emission Factor Tool.

12. 16.28 MMBtu/hr Natural Gas Boiler (B-2)
    The facility proposes to install one (1) 16.28 MMBtu/hr boiler (B-2) to provide steam for the wood treatment operations. The criteria pollutant emissions from this source are based on emission factors derived from DEQ AQ-EF05 – Emission Factors Gas Fired Boilers and US EPA 40 CFR 98, Tables C-1 and C-2. The federal HAP or CAO TAC emissions from this source are based on emission factors from DEQ's 2020 Air Toxics Emission Inventory Combustion Emission Factor Tool.

Production Limitations

13. The facility is limited to treating no more than 6,000,000 cubic feet per year and no more than 2,400 chargers per year. This limitation was originally required when the facility used pentachlorophenol in order to avoid triggering an increase above the Significant Emission Rate for VOC. Compliance will be based on recordkeeping.

14. The facility is limited to no more than two (2) retort door openings in any 60-minute period. This limitation is to prevent a sudden emission level that may result in odor complaint. This requirement is not based on past odor complaints, but rather the potential for future odor complaints. Compliance will be based on recordkeeping.

Nuisance Emission Limitations

15. Under LRAPA 49-010(1), the permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

16. Under LRAPA 32-055, 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. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

17. Under LRAPA 32-090(1), 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 is to be made by LRAPA. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

General Emission Limitations

18. Under LRAPA 48-015(1), 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. Compliance is demonstrated through a fugitive emissions survey performed at least once a month and taking the reasonable precautions listed under LRAPA 48-015(1).

19. The emission units at this facility are subject to the visible emission limitations under LRAPA 32-010(3). These emission units must not have visible emissions equal to or greater than 20% opacity for a period or periods aggregating more than three minutes in any one hour. Compliance is demonstrated through a visible emissions survey performed at least once a month.

20. The emission units at the facility, other than combustion units, are subject to particulate matter emission limitations under LRAPA 32-015(2)(b)(b). For sources installed, constructed or modified on or 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. Compliance is demonstrated through a visible emissions survey performed at least once a month.

21. Emission Unit B-1 is subject to particulate matter emission limitations under LRAPA 32-030(1)(b). For combustion sources installed, constructed or modified on or 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. Compliance is demonstrated through a visible emissions survey performed at least once a month.

22. Emission Unit B-2 is subject to particulate matter emission limitations under LRAPA 32-030(2). For sources installed, constructed, or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance is demonstrated through a visible emissions survey performed at least once a month.

23. LRAPA 32-008(2) requires new or modified emission units to meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR in title 38, Type A State NSR in LRAPA title 38, an applicable Standard of Performance for New Stationary Sources in title 46, or any other standard applicable only to new or modified sources in title 32, title 33, or title 39 for the regulated pollutant emitted; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.
    - 23.a. Each retort in Emission Unit EU-1 does have potential gaseous pollutant emissions that are equal to or greater than one (1) ton per year for VOCs. While LRAPA has not performed a formal TACT determination for VOCs, LRAPA has determined that controls are not typically used for these emission units at the calculated potential emission rates. Current operations likely meet TACT.
    - 23.b. Emission Units B-1 and B-2 are subject to 40 CFR 60 subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. As such, these emission units are not required to meet TACT.

New Source Performance Standards (NSPS)

24. Emission Unit B-1 is subject to 40 CFR 60 subpart Dc - 40 CFR 60 subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units because this emission unit is a steam generating unit for which construction commenced after June 9, 1989, and the emission unit has a maximum design heat input of 100 MMBtu per hour or less, but greater than or equal to 10 MMBtu per hour.

25. The 40 CFR 60 subpart Dc requirements that are applicable to Emission Unit B-1 are identified in the following table:

40 CFR 60 subpart Dc Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.40c	Applicability and delegation of authority	Yes	The boiler has a maximum heat input capacity between 10 and 100 MMBtu per hour.	NA
60.41c	Definitions	Yes	The boiler meets the definition of a *steam generating unit*.	NA
60.42c	Standards for sulfur dioxide (SO_2)	Yes	The facility elected to limit the sulfur weight percent of the fuel oil.	23, 24
60.43c	Standard for particulate matter (PM)	No	None.	NA
60.44c	Compliance and performance test methods and procedures for sulfur dioxide	Yes	None.	NA
60.45c	Compliance and performance test methods and procedures for particulate matter	No	None.	NA
60.46c	Emission monitoring for sulfur dioxide	No	None.	NA
60.47c	Emission monitoring for particulate matter	No	None.	NA
60.48c	Reporting and recordkeeping requirements	Yes	Under the authority of 40 CFR 60.19(c), LRAPA has moved the postmark deadlines to align with the February 15 reporting.	25-29

26. Emission Unit B-2 is subject to 40 CFR 60 subpart Dc - 40 CFR 60 subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units because this emission unit is a steam generating unit for which construction commenced after June 9, 1989, and the emission unit has a maximum design heat input of 100 MMBtu per hour or less, but greater than or equal to 10 MMBtu per hour.

27. The 40 CFR 60 subpart Dc requirements that are applicable to Emission Unit B-2 are identified in the following table:

40 CFR 60 subpart Dc Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.40c	Applicability and delegation of authority	Yes	The boiler has a maximum heat input capacity between 10 and 100 MMBtu per hour.	NA
60.41c	Definitions	Yes	The boiler meets the definition of a *steam generating unit*.	NA
60.42c	Standards for sulfur dioxide (SO_2)	No	None.	NA
60.43c	Standard for particulate matter (PM)	No	None.	NA
60.44c	Compliance and performance test methods and procedures for sulfur dioxide	No	None.	NA
60.45c	Compliance and performance test methods and procedures for particulate matter	No	None.	NA
60.46c	Emission monitoring for sulfur dioxide	No	None.	NA
60.47c	Emission monitoring for particulate matter	No	None.	NA
60.48c	Reporting and recordkeeping requirements	Yes	Maintain records of the monthly usage of natural gas by the boiler.	28, 29

National Emission Standards for Hazardous Air Pollutants (NESHAP)

28. The facility has requested Emission Unit B-1 be reclassed under 40 CFR 63 subpart 6J – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. A boiler that meets the definition of a gas fired boiler under 40 CFR 63.11237 is not subject to this NESHAP under 40 CFR 63.11195(e). As such, the PTE of this boiler will be recalculated assuming only 48 hours of fuel oil use and requirements related to the use of fuel oil under 40 CFR 63 subpart 6J will be removed from the current permit. No other regulatory changes result from the reclass of the boiler.

29. Emission Unit B-2 is not subject to 40 CFR 63 subpart 6J – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources because this emission unit is a gas fired boiler. Unlike Emission Unit B-1, Emission Unit B-2 will not have the ability to combust fuel oil. A boiler that meets the definition of a gas fired boiler under 40 CFR 63.11237 is not subject to this NESHAP under 40 CFR 63.11195(e).

30. Emission Unit EU-1 is subject to 40 CFR 63 subpart QQQQQQ (6Q) – National Emission Standards for Wood Preserving Area Sources because the facility is a wood preserving operation as defined under 40 CFR 63.11433 that is an area source of hazardous air pollutant emissions. The facility uses

DCOI and copper naphthenate as wood preservatives. The facility no longer uses pentachlorophenol. Because the facility no longer uses any wood preservatives containing chromium, arsenic, dioxins, or methylene chloride, the requirements of 40 CFR 63 subpart 6Q have been removed from the current permit. The facility will remain subject to 40 CFR 63 subpart 6Q as an existing source under the regulation. No further requirements apply under this NESHAP. The facility will be required to maintain documentation that the wood preservatives used at the facility do not contain the hazardous air pollutants of concern.

31. The 40 CFR 63 subpart 6Q requirements that are applicable to Emission Unit EU-1 are identified in the following table:

40 CFR 63 subpart 6Q Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.11428	Applicability	Yes	None.	NA
63.11429	Compliance Dates	Yes	None.	NA
63.11430	Standards	No	None.	NA
63.11432	General Provisions	No	None.	NA
63.11433	Definitions	Yes	None.	NA
63.11434	Implement and enforcement	Yes	None.	NA

Plant Site Emission Limits (PSELs)

32. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limit, and potential-to-emit:

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PTE (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	
PM	2.8	2.8	2.8	24	de minimis	0.64
PM_{10}	1.1	1.1	1.1	14	de minimis	0.43
$PM_{2.5}$	NA	1.1	1.1	9	de minimis	0.34
CO	0.3	0.3	0.3	99	13	13
NO_x	1.4	1.4	1.4	39	11	11
SO_2	0.1	0.1	0.1	39	de minimis	0.41
VOC	20.2	20.2	20.2	59	7.4	7.4
GHG (CO_2 eq)	2,823	2,823	2,823	74,000	15,906	15,906

33. The baseline emission rates for PM, PM_{10}, CO, NO_X, SO_2 and VOC were determined in previous permitting actions and there has been no changes. A baseline emission rate is not established for $PM_{2.5}$ in accordance with LRAPA 42-0048(3). The facility baseline for GHGs is based upon actual emissions from the 2004 calendar year.

34. The netting basis is equal to the baseline emission rate for all pollutants. The facility has not had any emission increases approved for any of the reasons listed under LRAPA 42-0046(3)(e). The $PM_{2.5}$ netting basis was established as being equivalent to the PM_{10} netting basis using the procedures

under LRAPA 42-0046(2)(b). The fraction of PM_{10} in the netting basis that is $PM_{2.5}$ is assumed to be 100%.

35. In accordance with OAR 340-222-0041(2), the PSEL for all pollutants emitted above de minimis are set equal to the sources potential-to-emit (PTE) for that pollutant. The previous PSELs for this facility was set at the Generic PSEL. No PSELs are set for PM, PM_{10}, $PM_{2.5}$, and SO_2 in accordance with LRAPA 42-0020(3)(a) because these pollutants are emitted at no more than the de minimis as defined in LRAPA title 12.

Significant Emission Rate

36. The PSEL increase over the netting basis is less than the Significant Emission Rate (SER) as defined in LRAPA title 12 for all pollutants.

Pollutant	Proposed PSEL (TPY)	PSEL Increase Over Netting Basis (TPY)	PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY)	PSEL Increase Due to Modification (TPY)	SER (TPY)
PM	NA	NA	NA	NA	25
PM_{10}	NA	NA	NA	NA	15
$PM_{2.5}$	NA	NA	NA	NA	10
CO	13	12.7	NA	NA	100
NO_x	11	9.6	NA	NA	40
SO_2	NA	NA	NA	NA	40
VOC	7.4	0	NA	NA	40
GHGs	15,906	13,083	NA	NA	75,000

Unassigned Emissions and Emission Reduction Credits

37. The facility has unassigned emissions as shown in the table below. Unassigned emissions are equal to the netting basis minus the source's current PTE, minus any banked emission reduction credits. The facility has zero (0) tons of emission reduction credits. In accordance with LRAPA 42-0055 the maximum unassigned emissions may not be more than the SER.

Pollutant	Proposed Netting Basis (TPY)	PTE (TPY)	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	2.8	0.64	1.8	0	25
PM_{10}	1.1	0.43	0.7	0	15
$PM_{2.5}$	1.1	0.34	0.8	0	10
CO	0.3	13	0	0	100
NO_x	1.4	11	0	0	40
SO_2	0.1	NA	0	0	40
VOC	20.2	7.4	12.8	0	40
GHGs	2,823	15,906	0	0	75,000

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

38. This source is located in an area that is designated attainment or unclassified for all regulated pollutants other than CO and PM_{10}. For pollutants other than CO and PM_{10}, the proposed PSELs are less than the federal major source threshold for non-listed sources of 250 TPY per regulated pollutant and are not subject to Major NSR. For CO and PM_{10}, the source is located in a maintenance area.

The proposed PSELs for CO and PM_{10} are less than the 100 TPY threshold that determines the applicability of Major NSR in a maintenance area.

Type A and Type B State NSR

39. For all NSR regulated pollutants the proposed modification will not have emissions per regulated pollutant equal to or greater than the SER over the netting basis that would require Type A or B State NSR.

Federal Hazardous Air Pollutants/Toxic Air Contaminants

40. Potential annual federal hazardous air pollutant emissions (FHAP) are based on the potential to emit of the facility operating under permit limitations. Naphthalene has the highest single FHAP emissions at 3.9E-02 tons per year. The potential total FHAP emissions are 0.55 tons per year. A major source of FHAPs is defined as having potential FHAP emissions of at least 10 tons per year of any single HAP and 25 tons per year of the aggregate of all FHAPs. This facility does not have potential FHAP emissions exceeding these thresholds and is considered a minor or area source of FHAPs.

41. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and, therefore, is not yet required to perform a risk assessment or report annual emissions of toxic air contaminants. LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and regulates approximately 260 toxic air contaminants (TAC) that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 TACs. The FHAPs and TACs listed below are based upon safety data sheets and standard emission factors for the types of emission units at this facility. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their TACs. Until then, this source will be required to report TAC emissions triennially.

42. The table below represents the potential emissions of federal HAPs/TACs from this facility assuming operation at the permit allowable limitations:

CAS Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
Organics				
75-07-0	Acetaldehyde	1.3E-03	Yes	Yes
107-02-8	Acrolein	1.3E-03	Yes	Yes
71-43-2	Benzene	7.8E-04	Yes	Yes
106-99-0	1,3-Butadiene	3.8E-05	Yes	Yes
100-41-4	Ethyl Benzene	9.1E-04	Yes	Yes
50-00-0	Formaldehyde	2.5E-03	Yes	Yes
110-54-3	Hexane	6.2E-04	Yes	Yes
91-20-3	Naphthalene	3.9E-02	Yes	Yes
NA	POM (inc. PAHs)	1.7E-04	Yes	Yes
115-07-1	Propylene	7.0E-02	No	Yes
108-88-3	Toluene	3.5E-03	Yes	Yes
1330-20-7	Xylenes	2.6E-03	Yes	Yes
Inorganic Gases				
7664-41-7	Ammonia	4.3E-01	No	Yes
7647-01-0	Hydrochloric Acid	4.8E-04	Yes	Yes
Metals				
7440-38-2	Arsenic	3.0E-05	Yes	Yes

CAS Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
7440-41-7	Beryllium	1.6E-06	Yes	Yes
7440-43-9	Cadmium	1.5E-04	Yes	Yes
7440-47-3	Chromium, Hexavalent	1.8E-04	Yes	Yes
7440-50-8	Copper	1.0E-05	No	Yes
7439-92-1	Lead Compounds	2.1E-05	No	Yes
7439-96-5	Manganese	5.8E-05	Yes	Yes
7439-97-6	Mercury	3.9E-05	Yes	Yes
7440-02-0	Nickel	2.9E-04	Yes	Yes
7782-49-2	Selenium	8.8E-06	Yes	Yes
	Total (TPY) =	0.55	5.4E-02	0.55

Toxic Release Inventory

43. The Toxics Release Inventory (TRI) is a federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

    - Cancer or other chronic human health effects;
    - Significant adverse acute human health effects; or
    - Significant adverse environmental effects.

    There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

    In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. For calendar year 2022, this facility reported the emissions of the following chemicals to the air:

Chemical Name	CAS Number	Fugitive Release (pounds)	Stack Release (pounds)	Total (pounds)
Dioxin and dioxin like compounds	TRI ID: N150	6.317E-4 grams	--	6.317E-4 grams
Pentachlorophenol	87-86-5	5	5	10
Polycyclic aromatic hydrocarbons	TRI ID: N590	0.1	0.1	0.2

NOTE: In 2022, the facility ceased using pentachlorophenol, which is the primary source of the dioxin emissions reported to TRI.

Compliance History

44. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The following table indicates the inspection history of this facility since 1993:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	07/21/1993	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	12/09/1994	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	06/20/1995	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	11/22/1996	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	09/25/1997	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	03/30/1998	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	04/18/2003	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	05/01/2008	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	04/24/2013	No areas of non-compliance discovered

45. LRAPA has not initiated any enforcement actions against this facility since at least 1993.

Performance Test Results

46. The facility is not required to conduct performance testing. LRAPA is not aware of any performance testing conducted at this facility.

Recordkeeping Requirements

47. The permittee must keep and maintain records for a period of at least five (5) years from the date of entry of the following information:

Activity	Units	Minimum Recording Frequency
PSEL Recordkeeping		
Date, time, type and quantity of material removed from the retorts.	NA	Each occurrence
Production of treated wood.	Cubic feet	Monthly and 12 month rolling
Date and time of retort door openings.	NA	Per Opening
Number of charges.	NA	Monthly and 12 month rolling
Name, type and quantity used for all chemicals used in the wood treatment process.	NA	Annually
The amount of natural gas combusted by each boiler.	Therms or MMCF	Monthly
The amount of fuel oil combusted by Emission Unit B-1.	Gallons	Monthly
General Recordkeeping		
Log of nuisance complaints.	NA	Upon receipt of complaint
Fugitive Emission Survey.	NA	Monthly
Visible Emission Survey.	NA	Monthly
Operation and Maintenance Plan.	NA	Maintain the current version on-site
Upset Log of all planned and unplanned excess emissions, as required by Condition G15.	NA	Per occurence
40 CFR 60 Subpart Dc Recordkeeping		

Activity	Units	Minimum Recording Frequency
The amount of natural gas combusted by each boiler.	Therms or MMCF	Monthly
The amount of fuel oil combusted by Emission Unit B-1.	Gallons	Monthly
Fuel oil supplier certifications for Emission Unit B-1.	NA	Each delivery of fuel oil
40 CFR 63 Subpart 6J Recordkeeping		
Total monthly and calendar year hours that the Emission Unit B-1 combusted fuel oil.	Hours	Monthly and calendar year
40 CFR 63 Subpart 6Q Recordkeeping		
Documentation that each wood preservative used does not use any chromium, arsenic, dioxins, or methylene chloride.	NA	Each wood preservative used

Reporting Requirements

48. The facility must submit to LRAPA the following reports by no later than the dates indicated in the table below:

Report	Reporting Period	Due Date
Semiannual fuel oil report as required by 40 CFR 60 subpart Dc for Emission Unit Boiler B-1.	Semiannual	Postmarked by February 15, August 15
The upset log information required by Condition G13 of the draft permit, if required by G13.	Annual	February 15
PSEL pollutant emissions as calculated according to Conditions 5 and 6 of the draft permit, including supporting calculations.	Annual	February 15
GHG Report, if required by Condition 35 of the draft permit.	Annual	March 31

Public Notice

49. Pursuant to LRAPA 34-0066(4)(a)(A), issuance of modified Standard Air Contaminant Discharge Permit requires public notice of the proposed permit action and a minimum of 35-days for interested persons to submit written comments.

    The draft permit was on public notice October 30, 2023 to December 5, 2023. No written comments were submitted during the 35-day comment period.

JJW/MH/cmw
12/06/2023

McFarland Cascade - 205108
Emission Detail Sheets
Facility Potential Emissions Summary

Criteria Pollutant Emissions

	PM (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)	NO_x (TPY)	CO (TPY)	SO_2 (TPY)	VOC (TPY)*	GHGs (TPY)
PTE	0.64	0.43	0.34	11	13	0.41	7.4	15,906
PSEL	de minimis	de minimis	de minimis	11	13	de minimis	7.4	15,906

FHAP/TAC Emissions

Pollutant	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic
Organics			
Acetaldehyde	1.3E-03	Yes	Yes
Acrolein	1.3E-03	Yes	Yes
Benzene	7.8E-04	Yes	Yes
1,3-Butadiene	3.8E-05	Yes	Yes
Ethyl Benzene	9.1E-04	Yes	Yes
Formaldehyde	2.5E-03	Yes	Yes
Hexane	6.2E-04	Yes	Yes
Naphthalene	3.9E-02	Yes	Yes
POM (inc. PAHs)	1.7E-04	Yes	Yes
Propylene	7.0E-02	No	Yes
Toluene	3.5E-03	Yes	Yes
Xylenes	2.6E-03	Yes	Yes
Inorganic Gases			
Ammonia	4.3E-01	No	Yes
Hydrochloric Acid	4.8E-04	Yes	Yes
Metals			
Arsenic	3.0E-05	Yes	Yes
Beryllium	1.6E-06	Yes	Yes
Cadmium	1.5E-04	Yes	Yes
Chromium, Hexavalent	1.8E-04	Yes	Yes
Copper	1.0E-05	No	Yes
Lead Compounds	2.1E-05	No	Yes
Manganese	5.8E-05	Yes	Yes
Mercury	3.9E-05	Yes	Yes
Nickel	2.9E-04	Yes	Yes
Selenium	8.8E-06	Yes	Yes
Total Emissions (TPY) =	5.5E-01	5.4E-02	5.5E-01
Max Individual FHAP (TPY) =		3.9E-02	

Notes:

McFarland Cascade - 205108
Emission Detail Sheets
Boiler Emission Calculations

Boiler Specifications

Max Heat Input	16.28	MMBtu/hr
Heat Value - Natural Gas	1026	MMBtu/MMCF
Max Hrs Operation	8760	hr/yr

Criteria Pollutants

Pollutant	NG Emission Factor (lb/MMCF)	NG EF Units	Potential Annual Emissions (TPY)
PM	2.5	lb/MMCF	0.17
PM_{10}	2.5	lb/MMCF	0.17
$PM_{2.5}$	2.5	lb/MMCF	0.17
Carbon Monoxide	84	lb/MMCF	5.84
Nitrogen Oxides	100	lb/MMCF	6.95
Sulfur Dioxide	1.7	lb/MMCF	0.12
VOCs	5.5	lb/MMCF	0.38
GHGs (CO_2 equiv.)	117	lb/MMBtu	8,350

FHAP/TAC Emissions

Pollutant	NG Emission Factor (lb/MMCF)	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic
Organics				
Acetaldehyde	0.0031	2.2E-04	Yes	Yes
Acrolein	0.0027	1.9E-04	Yes	Yes
Benzene	0.0058	4.0E-04	Yes	Yes
Ethyl Benzene	0.0069	4.8E-04	Yes	Yes
Formaldehyde	0.0123	8.5E-04	Yes	Yes
Hexane	0.0046	3.2E-04	Yes	Yes
Naphthalene	0.0003	2.1E-05	Yes	Yes
POM (inc. PAHs)	0.0004	2.8E-05	Yes	Yes
Propylene	0.5300	3.7E-02	No	Yes
Toluene	0.0265	1.8E-03	Yes	Yes
Xylenes	0.0197	1.4E-03	Yes	Yes
Inorganic Gases				
Ammonia	3.2000	2.2E-01	No	Yes
Metals				
Arsenic	2.0E-04	1.4E-05	Yes	Yes
Beryllium	1.2E-05	8.3E-07	Yes	Yes
Cadmium	1.1E-03	7.6E-05	Yes	Yes
Chromium, Hexavalent	1.4E-03	9.7E-05	Yes	Yes
Manganese	3.8E-04	2.6E-05	Yes	Yes
Mercury	2.6E-04	1.8E-05	Yes	Yes
Nickel	2.1E-03	1.5E-04	Yes	Yes
Selenium	2.4E-05	1.7E-06	Yes	Yes
	Total Emissions =	2.7E-01	6.1E-03	2.7E-01

GHG-Related Emission Factors

Pollutant	Natural Gas (kg/MMBtu)	GWP
Carbon Dioxide (CO_2)	53.06	1
Methane (CH_4)	1.0E-03	25
Nitrous Oxide (N_2O)	1.0E-04	298

Notes:

$PM/PM_{10}/PM_{2.5}$, SO_2, NOx, CO and VOC emissions factors are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011)
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2
Toxics emission factors from DEQ 2020 Air Toxics Emission Inventory Combustion Emission Factor Tool
Chromium assumed to be hexavalent

McFarland Cascade - 205108
Emission Detail Sheets
Boiler Emission Calculations

Boiler Specifications

Max Heat Input	14.7	MMBtu/hr
Heat Value - Natural Gas	1,026	MMBtu/MMCF
Heat Value - Fuel Oil	138	MMBtu/1000 Gal
Max Hrs Operation - NG	8,712	hr/yr
Max Hrs Operation - FO	48	hr/yr

Criteria Pollutants

Pollutant	NG Emission Factor	NG EF Units	FO Emission Factor	FO EF Units	Potential Annual Emissions (TPY)
PM	2.5	lb/MMCF	3.3	lb/1000 Gal	0.16
PM_{10}	2.5	lb/MMCF	2.3	lb/1000 Gal	0.16
$PM_{2.5}$	2.5	lb/MMCF	1.6	lb/1000 Gal	0.16
Carbon Monoxide	84	lb/MMCF	5	lb/1000 Gal	5.26
Nitrogen Oxides	100	lb/MMCF	20	lb/1000 Gal	6.29
Sulfur Dioxide	1.7	lb/MMCF	71	lb/1000 Gal	0.29
VOCs	5.5	lb/MMCF	0.2	lb/1000 Gal	0.34
GHGs (CO_2 equiv.)	117	lb/MMBtu	164	lb/MMBtu	7,556

FHAP/TAC Emissions

Pollutant	NG Emission Factor (lbs/MMCF)	FO Emission Factor (lbs/1000 Gal)	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic
Organics					
Acetaldehyde	0.0031	0.3506	1.1E-03	Yes	Yes
Acrolein	0.0027	0.3506	1.1E-03	Yes	Yes
Benzene	0.0058	0.0044	3.7E-04	Yes	Yes
1,3-Butadiene		0.0148	3.8E-05	Yes	Yes
Ethyl Benzene	0.0069	0.0002	4.3E-04	Yes	Yes
Formaldehyde	0.0123	0.3506	1.7E-03	Yes	Yes
Hexane	0.0046	0.0035	3.0E-04	Yes	Yes
Naphthalene	0.0003	0.0053	3.2E-05	Yes	Yes
POM (inc. PAHs)	0.0004	0.0445	1.4E-04	Yes	Yes
Propylene	0.5300		3.3E-02	No	Yes
Toluene	0.0265	0.0044	1.7E-03	Yes	Yes
Xylenes	0.0197	0.0016	1.2E-03	Yes	Yes
Inorganic Gases					
Ammonia	3.2000	2.9	2.1E-01	No	Yes
Hydrochloric Acid		0.1863	4.8E-04	Yes	Yes
Metals					
Arsenic	2.0E-04	0.0016	1.7E-05	Yes	Yes
Beryllium	1.2E-05		7.5E-07	Yes	Yes
Cadmium	1.1E-03	0.0015	7.2E-05	Yes	Yes
Chromium, Hexavalent	1.4E-03	0.0001	8.8E-05	Yes	Yes
Copper		0.0041	1.0E-05	No	Yes
Lead Compounds		0.0083	2.1E-05	No	Yes
Manganese	3.8E-04	0.0031	3.2E-05	Yes	Yes
Mercury	2.6E-04	0.002	2.1E-05	Yes	Yes
Nickel	2.1E-03	0.0039	1.4E-04	Yes	Yes
Selenium	2.4E-05	0.0022	7.1E-06	Yes	Yes
	Total Emissions =		2.5E-01	8.9E-03	2.5E-01

GHG-Related Emission Factors

Pollutant	Natural Gas (kg/MMBtu)	Fuel Oil (kg/MMBtu)	GWP
Carbon Dioxide (CO_2)	53.06	73.96	1
Methane (CH_4)	1.0E-03	3.0E-03	25
Nitrous Oxide (N_2O)	1.0E-04	6.0E-04	298

Notes:
Natural gas emissions factors, except GHGs, are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011)
Fuel oil emissions factors, except GHGs, are based on DEQ Emission Factors Oil Fired Boilers, AQ-EF04 (08/01/2011)
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2
Toxics emission factors from DEQ 2020 Air Toxics Emission Inventory Combustion Emission Factor Tool
Chromium assumed to be hexavalent

McFarland Cascade - 205108
Emission Detail Sheets
Treatment Plant Calculations

Treatment Plant Details

Total Wood Treated =	6,000,000	cubic feet/year
Total Preservative Used =	5,100,000	gal/year

Totals below each calculated using the total wood and preservative used amounts

DCOI Treatment**

Pollutant	EF	PTE (TPY)
VOC	Material Balance*	6.7
Naphthalene	Material Balance*	0.039

Includes treating cylinders, work tanks and storage tanks. Other sources not included.
**Dichloro-octyl-isothiazonlinone (4,5-Dichloro-2-n-octyl-4-isothiazolin-3-one, CAS # 64359-81-2)
Naphthalene is from the fuel/carrier oil. SDS listed as "less than 1%".

Copper Napthenate (CuNap) Treatment

Pollutant	EF	PTE (TPY)
VOC	Material Balance*	5.6
Naphthalene	Material Balance*	0.033

Includes treating cylinders, work tanks and storage tanks. Other sources not included.
Naphthalene is from the fuel/carrier oil. SDS listed as "less than 1%".

*All emissions are from the facility's emission estimation tools/software/workshseets
and are based on EPA AP-42 Chapter 7, Liquid Storage Tanks and the use of liquid mass fractions to estimate the vapor mass fraction

Fugitive emissions from treated storage have not been included in the emission estimates.

Emission Factor (VOC)	
0.00224	lb/cubic feet

EF is derived from the total PTE for VOC from DCOI treatment (6.7 tons/year), divided by the total wood treated (6 million cu. ft./year)

McFarland Cascade - 205108

Emission Detail Sheets

Unpaved Road Emission Calculations

VMT and Unpaved Roads

Insignificant Emission Unit - Unpaved Roads (Updated with 2020 Renewal)

PM	0.30	tons/year
PM10	0.09	tons/year
PM2.5	0.01	tons/year

Vehicles	VMT/year	
Trucks	500	Update based on facility estimation

Unpaved Road Dust Emission Factor Calculation--AP-42 13.2.2 11/06

VMT - Loaders

	k (lb/VMT)	s(%)	C	a	b	W	E (uncorrected)	E (Corrected)*
PM-30	4.9	4.0	0.00047	1.0	0.45	5.0	2.06	**1.21**
PM10	1.5	4.0	0.00047	1.0	0.45	5.0	0.63	**0.37**
PM2.5	0.2	4.0	0.00036	1.0	0.45	5.0	0.06	**0.04**

*Corrected for number of days with at least 0.254 mm of precipation per year, P =150 based on Figure 13.2.2-1

Notes:

Includes only unpaved roads

Paved roads and paved parking lots within an urban growth boudary are considered "Categorically Insignificant Activities" according to the definition in LRAPA Title 12

Lane Regional Air Protection Agency
Standard Air Contaminant Discharge Permit

REVIEW REPORT

McFarland Cascade Pole & Lumber Company **Permit No. 205108**
90049 Highway 99 North
Eugene, Oregon 97402
http://www.ldm.com/

Source Information:

SIC	2491 – Wood Preserving (primary) 4961 – Fuel Burning Equipment (secondary)
NAICS	321114 – Wood Preserving (primary) 221330 – Fuel Burning Equipment (secondary)

Source Categories (LRAPA Title 37, Table 1)	B. 73 – Wood preserving C. 3 - Source electing to maintain the netting basis C.4 – Source w/ PSEL >SER
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	n
Emission credits	n
Special Conditions	y
Compliance schedule	n

Source test [date(s)]	n
COMS	n
CEMS	n
Ambient monitoring	n

Reporting Requirements:

Annual report (due date)	Mar 15
NSPS Report (due date)	Jan 30, July 30
Monthly report (due dates)	n

Excess emissions report	y
Other reports	Biennial Boiler Tune-Up and GHG

Air Programs:

NSPS (list subparts)	Dc
NESHAP (list subparts)	JJJJJJ (6J), QQQQQQ (6Q)
CAM	n
Regional Haze (RH)	n
Synthetic Minor (SM)	n
SM-80	n
Part 68 Risk Management	n
Title V	n
ACDP (SIP)	n
Major HAP source	n
Federal major source	n
New Source Review (NSR)	n
Prevention of Significant Deterioration (PSD)	n
Acid Rain	n
Clean Air Mercury Rule (CAMR)	n
TACT	y
>20 Megawatts	n

Permit Action

1. This is a permit renewal for an existing Standard Air Contaminant Discharge Permit (Standard ACDP) which was issued on March 17, 2015 and scheduled to expire on March 17, 2020. The permit will remain valid until LRAPA issues the renewed permit. The facility operates a process listed in Table 1, Part B and C, of LRAPA Title 37 and is, therefore, required to obtain an air contaminant discharge permit (ACDP). McFarland Cascade Pole and Lumber Company ("McFarland" or "the facility") is requesting renewal of their permit.

2. The facility applied for a permit modification on June 19, 2020 as part of the renewal to include two new wood preservation chemicals (in addition to pentachlorphenol): DCOI (Dichloro-octyl-isothiazonlinone) and copper naphthenate. The permit renewal includes the addition of the two new wood preservation chemicals, although there are no specific references to either chemical. See emission details attached to this review report for more information.

Other Permits

3. No other permits have been issued or are required by LRAPA for this facility.

Attainment Status

4. This facility is located in an attainment area for all pollutants. The Eugene-Springfield area is designated as an attainment area with a maintenance plan for both PM_{10} and CO.

Overview

5. McFarland Cascade Pole and Lumber Company operates a wood treatment facility in Eugene, Oregon. Wood products are treated under pressure in closed cylindrical vessels called retorts. The treatment chemicals include pentachlorophenol, DCOI ("Dichloro-octyl-isothiazonlinone), and copper naphthenate, and a carrier oil for the wood preservative (typically "FP9 oil"). Emissions are from the four (4) retorts, one (1) 14.7 MMBtu/hr natural gas-fired boiler with oil backup, and fugitive emissions sources (unpaved roads, storage tanks, vacuum pumps, paint and aerosol usage, flanges, valves and other pumps). The maximum operating schedule for the facility is 8,760 hours per year (24 hours per day, 7 days per week, and 52 weeks per year).

6. The facility installed a fiber bed filter used to improve control of VOCs and odors prior to the last permit renewal.

Compliance

7. The facility was inspected on April 24, 2013 and found to be in compliance with permit conditions.

8. During the prior permit period LRAPA received one (1) complaint about odor from the facility.

9. There have been no enforcement actions performed against the facility.

Emissions

10. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limit (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM	2.8	2.8	2.8	24	24	0
PM_{10}	1.1	1.1	1.1	14	14	0
$PM_{2.5}$	NA	1.1	1.1	9	9	0
CO	0.3	0.3	0.3	99	99	0
NO_X	1.4	1.4	1.4	39	39	0
SO_2	0.1	0.1	0.1	39	39	0
VOC	20.2	20.2	20.2	59	59	0
GHG	2,823	2,823	2,823	74,000	74,000	0

10.a. The baseline emission rates for PM, PM_{10}, CO, NO_X, SO_2 and VOC were determined in previous permitting actions and there has been no changes.

10.b. In accordance with LRAPA 42-0041(1) the PSELs for PM, PM_{10}, $PM_{2.5}$, CO, NO_X, and SO_2 are set at the generic PSEL levels. In accordance with LRAPA 42-0041(2) the VOC PSEL is set at the source specific PSEL level accounting for the VOC Baseline Emission Rate.

10.c. A baseline emission rate is not required for $PM_{2.5}$ in accordance with LRAPA 42-0048(3). The $PM_{2.5}$ netting basis was established with the previous renewal as being equivalent to the PM_{10} netting basis. The fraction of PM_{10} in the netting basis that is $PM_{2.5}$ is assumed to be 100%. The PM from the boiler combustion in the baseline year is assumed to be 100% $PM_{2.5}$.

10.d. The baseline for greenhouse gases (GHGs) is based upon actual emissions from 2004 calendar year.

10.e. The PSEL for greenhouse gases GHGs has been set at the generic PSEL level because the facility has demonstrated that GHGs emissions are lower than the “de minimis” emission level.

10.f. Emissions from the pole shaving were calculated previously and were shown to be minimal. This permit does not contain limits on pole shaving emissions.

10.g. The facility does not currently have any unassigned emissions or Emission Reduction Credits.

Hazardous air pollutants/Toxic Air Contaminants

11. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by

LRAPA and is therefore, not yet required to perform a risk assessment or report annual emissions of toxic air contaminants.

LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All 187 hazardous air pollutants are on the list of approximately 600 toxic air contaminants. The hazardous air pollutants and toxic air contaminants listed below were reported by the source in 2016 and verified by LRAPA. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially.

12. This source is not a major source of hazardous air pollutants (HAPs). The HAP emissions detail is provided at the end of this report. Provided below is a summary of the HAP and toxic air contaminant (TAC) actual emission estimates from the 2016 calendar year.

Pollutant Name	Sum Of Actual Source Emissions (lbs/yr)
1,2,4-Trimethylbenzene	12.946
1,4-Dichlorobenzene	0.053
Acetaldehyde	0.136
Acrolein	0.119
Arsenic	0.009
Barium	0.194
Benzene	0.255
Beryllium	0.001
Cadmium	0.048
Cobalt	0.004
Copper and compounds	0.037
Cumene	1.681
Ethyl benzene	14.230
Formaldehyde	0.541
Hexane	0.202
Lead	0.022
Manganese	0.017
Mercury	0.011
Methyl ethyl ketone	39.684
Methyl isobutyl ketone	11.717
Naphthalene	0.013
Nickel	0.092
Pentachlorophenol	6.842
Propylene	23.316
Propylene glycol monomethyl ether acetate	14.786

Pollutant Name	Sum Of Actual Source Emissions (lbs/yr)
Selenium	0.001
PAHs (excluding naphthalene)	0.004
Toluene	749.150
Vanadium (fume or dust)	0.101
Xylenes (mixed)	86.507
Zinc	1.276
TOTAL	963.983

Toxics Release Inventory

13. The Toxics Release Inventory (TRI) is federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment, over which LRAPA has no regulatory authority. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:
    - Cancer or other chronic human health effects;
    - Significant adverse acute human health effects; or
    - Significant adverse environmental effects.

    There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical.

    McFarland Cascade Pole and Lumber Company reported the release of the following TRI-listed chemicals and amounts for the calendar year 2018:

Hazardous Air Pollutant/Toxic Air Contaminant	Potential to Emit (pounds/year)
Pentachlorophenol	16
Polycyclic Aromatic Compounds	0.5
Dioxin and Dioxin-like Compounds	0.0004 (0.1656 grams/year)

Other Emissions Limitations

14. The permit includes general visible emissions limitations for the facility. The permit also includes general grain-loading (particulate matter) limitations and fugitive emission precautions for the facility.

Production Limits

15. The facility is limited to treating no more than 6,000,000 cubic feet per year and/or no more than 2,400 charges per 12-month rolling period. The facility production will be limited to prevent increasing VOC emissions by more than the Significant Emission Rate.

16. The facility is also limited to no more than two (2) retort door openings in any 60-minute period. This is to prevent a sudden emission level that may result in odor complaints. This is not based on past odor complaints, but rather the potential for future odor complaints.

17. The previous permit included a 1,098,592 gallon/year limit on fuel oil combustion. That limit was removed with the proposed permit because it was determined that the boiler could not physically combust more than maximum fuel oil combustion (920,000 gallons/year, based on the maximum design heat input of 14.7 MMBtu/hour). In lieu of a usage limit on fuel oil combustion, the permit includes emission factors and calculations that are required to be used to show compliance with the respective PSELs.

Typically Achievable Control Technology (TACT)

18. LRAPA 32-008 requires an existing emission unit at a facility to meet TACT if the emissions unit has emissions of criteria pollutants greater than ten (10) tons per year of any gaseous pollutant or five (5) tons per year of particulate, and the emissions unit is not subject to the emissions standards under LRAPA Title 30, Title 32, Title 33, Title 38, Title 39, or Title 46 for the pollutants emitted, and the facility is required to have a permit. The retorts and boilers each emit greater than 10 tons/year of gaseous pollutants and is, therefore, required to meet TACT. While a formal TACT determination has not been conducted, the type of controls and work practices used by the facility are considered TACT by LRAPA.

Criteria Pollutants

19. A major source is a facility that has the potential to emit more than 100 tons per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions.

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

20. Because the proposed PSELs for all regulated pollutants are below the Significant Emission Rates (SERs) in LRAPA Title 12, the facility is not subject to LRAPA's PSD requirements for PM_{10}, $PM_{2.5}$, SO_X, NO_X, CO, and VOC in LRAPA Title 38.

New Source Performance Standards (NSPS)

21. Because the boiler at the facility has a maximum heat input capacity between 10 MMBtu/hr and 100 MMBtu/hr (14.7 MMBtu/hr), and it was constructed after June 9, 1989, the boiler is subject to 40 CFR 60, Subpart Dc; New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units, including, but not limited to, record keeping of fuel usage and annual reporting.

22. As stated in the NSPS and LRAPA 32-065(2)(b) the sulfur content in the backup fuel oil may not exceed 0.5% by weight. The facility is allowed to demonstrate compliance with this rule by fuel supplier certification.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

23. The facility emits less than 10 tons per year of any single HAP and less than 25 tons per year for any combination of HAPs and is therefore an "area" source of HAPs. As an area source of HAPs the facility is subject to 40 CFR 63, Subpart QQQQQQ – National Emission Standards for HAPs for Wood Preserving area sources. Use of pentachlorophenol as a wood preservative makes the NESHAP applicable to the facility because dioxin may be formed as a byproduct of its use. EPA recognized in the NESHAP that dioxin emissions at wood preserver facilities is due to the use of pentachlorophenol.

24. The boiler at the facility is applicable to 40 CFR 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources because the boiler is an existing industrial boiler firing liquid fuels at an area source per 40 CFR 63 Subpart 63.11194. The NESHAP requires boilers firing liquid fuels with a heat input capacity of 10 million Btu per hour or greater to submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed per Table 2 of the subpart. The existing boiler must also have biennial tune-ups.

Reporting

25. In accordance with 40 CFR 60.48(c), the facility is required to submit semi-annual reports of the use of No. 2 oil for semi-annual periods when No. 2 oil is used. The semi-annual reports are to be postmarked by the 30th day following the end of the reporting period, and include the following information:

25.a. The name of the oil supplier;

25.b. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c;

25.c. A certification statement signed by the permittee that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

26. By March 15th each year, the facility is required to submit an annual report to include the following information:

Parameter	Units
(a) Quantity of wood treated by each treatment chemical	Cubic Feet/year
(b) Amount and type of all chemicals used in the wood treatment process	Gallons/year
(c) Natural gas combustion	Cubic Feet/year
(d) Oil combustion	Gallons/year
(e) Certification by supplier of sulfur content in oil	NA
(f) Certification of biennial boiler tune-ups **Error! Reference source not found.**	NA

27. The facility is also required to submit an annual GHG report, as applicable, in accordance with OAR 340 division 215.

Source Testing

28. Source testing is not required by the permit. The use of production limits and associated emission factors are sufficient to show compliance with the PSELs.

Public Notice

29. The draft permit was on public notice from October 2, 2020 to November 5, 2020. During this period, LRAPA received one comment from the general public. The commenter expressed concern about fugitive emissions of particulate matter (PM) and asked if fenceline monitoring should be required.

    LRAPA Response: While the Plant Site Emission Limit (PSEL) in the permit for PM is set at the generic PSEL level of 24 tons/year, the facility has the potential to emit (PTE) a much lesser amount. As shown on pages 9 and 10 of this review report, the PTE for PM from natural gas and diesel combustion are 0.16 tons/year and 1.52 tons/year, respectively. Actual emissions are even less than the PTE. For example, in 2019 the facility reported PM emissions from natural gas and diesel combustion of 113 pounds/year and 172 pounds/year, respectively. Truck traffic estimated emissions of PM are also relatively insignificant at 600 pounds/year. For facilities that have a PTE above the de minimis (e.g. 1 ton/year for PM), the LRAPA rules (in Title 42) require the PSEL be set at the generic PSEL level.

    As far as fenceline monitoring is concerned, low-cost air sensors are a potential option, but they do not factor in wind direction and are not typically required in our area for indications of industrial source fugitive emissions.

Max
11/09/2020

Emission Details

Emission Summary

Pollutant	Potential to Emit (tons/year)	PSEL (tons/year)
PM	1.52	24
PM10	1.06	14
PM2.5	0.74	9
CO	5.4	99
NOx	9.2	39
SO2	32.7	39
VOC	43.7	59
GHG	18053	74,000

Boiler Emission Details

Max Hourly Heat Input =	14.7	MMBtu/hr
Maximum Annual Gas usage =	129	MMCF/yr
Maximum Annual No.2 Oil usage =	920	kgal/yr

Gas

Pollutant	Gas Emission Factor (lb/MMCF)	EF Ref	Potential to Emit (tons/yr)
PM	2.5	DEQ AQEF-05	0.16
PM10	2.5	DEQ AQEF-05	0.16
PM2.5	2.5	DEQ AQEF-05	0.16
SO2	1.7	DEQ AQEF-05	0.11
NOX	100	DEQ AQEF-05	6.44
CO	84	DEQ AQEF-05	5.41
VOC	5.5	DEQ AQEF-05	0.35
GHG	1.20E+05	40 CFR Part 98	7726.32

Oil

Pollutant	No. 2 Oil Emission Factor (lb/kgal)	EF Ref	Potential to Emit (tons/yr)
PM	3.3	DEQ AQEF-04	1.52
PM10	2.3	DEQ AQEF-04	1.06
PM2.5	1.6	DEQ AQEF-04	0.74
SO2	71	DEQ AQEF-04	32.65
NOX	20	DEQ AQEF-04	9.20
CO	5	DEQ AQEF-04	2.30
VOC	0.2	DEQ AQEF-04	0.09
GHG	2.25E+04	40 CFR Part 98	10,327

1 cubic foot of natural gas = 1000 Btu

1 gallon of No. 2 fuel oil = 140,000 Btu

Boiler capable of operating 8760 hours/year on either gas or fuel oil

Treatment Plant Details

Total Wood Treated = 6,000,000 cubic feet/year
Total Preservative Used = 5,100,000 gal/year
Totals below each calculated using the total wood and preservative used amounts

Pentachlorophenol Treatment

Pollutant	EF	Potential to Emit (tons/year)
VOC	Material Balance*	43.3
Pentachlorophenol	Material Balance*	0.004

Includes treating cylinders, vacuum pumps, flanges, valves, pumps, work tanks and storage tanks

DCOI Treatment**

Pollutant	EF	Potential to Emit (tons/year)
VOC	Material Balance*	6.7
Naphthalene	Material Balance*	0.039

Includes treating cylinders, work tanks and storage tanks. Other sources not included

**Dichloro-octyl-isothiazonlinone (4,5-Dichloro-2-n-octyl-4-isothiazolin-3-one, CAS # 64359-81-2)

Naphthalene is from the fuel/carrier oil. SDS listed as "less than 1%".

Copper Naphthenate (CuNap) Treatment

Pollutant	EF	Potential to Emit (tons/year)
VOC	Material Balance*	5.6
Naphthalene	Material Balance*	0.033

Includes treating cylinders, work tanks and storage tanks. Other sources not included

Naphthalene is from the fuel/carrier oil. SDS listed as "less than 1%".

*All emissions are from the facility's emission estimation tools/software/worksheets

and are based on EPA AP-42 Chapter 7, Liquid Storage Tanks and the use of liquid mass fractions to estimate the vapor mass fraction

Fugitive emissions from treated storage have not been included in the emission estimates.

Emission Factor (VOC)	
0.01443	**lb/cubic feet**

EF is derived from the total PTE for VOC from Penta treatment (43.3 tons/year), divided by the total wood treated (6 million cu. ft./year)

VMT and Unpaved Roads

Insignificant Emission Unit - Unpaved Roads — Updated with 2020 Renewal

PM	0.30	tons/year
PM10	0.09	tons/year
PM2.5	0.01	tons/year

Vehicles	VMT/year	
Trucks	500	Update based on facility estimation

Unpaved Road Dust Emission Factor Calculation--AP-42 13.2.2 11/06

VMT - Loaders

	k (lb/VMT)	s(%)	C	a	b	W	E (uncorrected)	E (Corrected)*
PM-30	4.9	4.0	0.00047	1.0	0.45	5.0	2.06	**1.21**
PM10	1.5	4.0	0.00047	1.0	0.45	5.0	0.63	**0.37**
PM2.5	0.2	4.0	0.00036	1.0	0.45	5.0	0.06	**0.04**

*Corrected for number of days with at least 0.254 mm of precipation per year, P =150 based on Figure 13.2.2-1

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k\,(s/12)^a (W/3)^b \qquad (1a)$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
M = surface material moisture content (%)
S = mean vehicle speed (mph)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

Includes only unpaved roads

Paved roads and paved parking lots within an urban growth boudary are considered "Categorically Insignificant Activities" according to the definition in LRAPA Title 12