



**OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**OREGON TITLE V OPERATING PERMIT**

Issued in accordance with provisions of ORS 468A.040  
and based on land use compatibility findings included in the permit record.

ISSUED TO:

Gilchrist Forest Products LLC  
P.O. Box 784  
Gilchrist, OR 97737

INFORMATION RELIED UPON:

Application Number: 34670  
Received: 3/9/2023

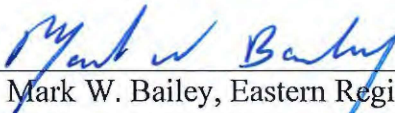
PLANT SITE LOCATION:

Gilchrist Facility  
#1 Sawmill Road  
Gilchrist, OR 97737

LAND USE COMPATIBILITY  
STATEMENT:

Issued by: Klamath County  
Dated: 03/28/1994

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

  
Mark W. Bailey, Eastern Region Air Quality Manager

**JUL 25 2023**

Date

<u>Nature of Business</u>	<u>SIC</u>	<u>NAICS</u>
Sawmill and Planing Mill	2421	321113

RESPONSIBLE OFFICIAL

John Ernst  
Title: Plant Manager  
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FACILITY CONTACT PERSON

Ron Clark  
Title: Environmental Coordinator  
Phone: 541-433-3341

**Addendum No. 1**  
**Significant Permit Modification**

In accordance with OAR 340-218-0160 and OAR 340-218-0180 the permit is revised as follows  
(changes are shown in yellow highlighting):

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**LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT**

ACDP	Air Contaminant Discharge Permit	NSPS	New Source Performance Standard
ASTM	American Society for Testing and Materials	NSR	New Source Review
AQMA	Air Quality Maintenance Area	O <sub>2</sub>	Oxygen
calendar year	The 12-month period beginning January 1st and ending December 31 <sup>st</sup>	OAR	Oregon Administrative Rules
CAO	Cleaner Air Oregon	ORS	Oregon Revised Statutes
CFR	Code of Federal Regulations	O&M	Operation and Maintenance
CO	Carbon Monoxide	PCD	Pollution Control Device
CO <sub>2e</sub>	Carbon Dioxide Equivalent	PM	Particulate Matter
CPMS	Continuous Parameter Monitoring System	PM <sub>10</sub>	Particulate Matter less than 10 microns in size
DEQ	Oregon Department of Environmental Quality	PM <sub>2.5</sub>	Particulate Matter less than 2.5 microns in size
dscf	dry standard cubic foot	ppmv	parts per million by volume
EF	Emission Factor	PSD	Prevention of Significant Deterioration
ESP	Electrostatic Precipitator	PSEL	Plant Site Emission Limit
EPA	US Environmental Protection Agency	PTE	Potential to Emit
FCAA	Federal Clean Air Act	RACT	Reasonably Available Control Technology
Gal	Gallon(s)	scf	standard cubic foot
GHG	Greenhouse Gas	SER	Significant Emission Rate
gr/dscf	grains per dry standard cubic foot	SIC	Standard Industrial Code
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	SIP	State Implementation Plan
HCFC	Halogenated Chloro-Fluoro-Carbon	SO <sub>2</sub>	Sulfur Dioxide
ID	Identification Number	Special Control Area	as defined in OAR 340-204-0070
lb	Pound(s)	ST	Source Test
MMBtu	Million British thermal units	TACT	Typically Achievable Control Technology
NA	Not Applicable	VE	Visible Emissions
NESHAP	National Emissions Standards for Hazardous Air Pollutants	VOC	Volatile Organic Compound
NO <sub>x</sub>	Nitrogen Oxides	year	A period consisting of any 12 consecutive calendar months

**PERMITTED ACTIVITIES**

1. ~~Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air contaminants from those processes and activities directly related to or associated with air contaminant source(s) in accordance with the requirements, limitations and conditions of this permit. [OAR 340-218-0010 and 340-218-0120(2)]~~
2. ~~All conditions in this permit are federally enforceable, meaning that they are enforceable by DEQ, EPA and citizens under the Clean Air Act, except Conditions 6, 7, 8, G5 and G9 (OAR 340-248-0005 through 340-248-0180) are enforceable only by the state. [OAR 340-218-0060]~~

**EMISSIONS UNIT (EU) AND POLLUTION CONTROL DEVICE (PCD) IDENTIFICATION**

3. ~~The emissions units regulated by this permit are the following: [OAR 340-218-0040(3)]~~

Emission Unit Description	EU ID	Device Description	Pollution Control Devices		
			Description	PCD	
Steam Plant	B-1	Wood/bark fired boiler	Multiclone; Electrostatic Precipitator	Multiclone #1	ESP
	B-2			Multiclone #2	
		B-3	Natural gas/oil fired boiler	None	NA
Building Heat	B-4	Natural gas/oil fired boiler	None	NA	
	B-5				
Kilns	Kilns	Kilns	None	NA	
Material Handling	Cyclone A, B	Hog fuel cyclones	None	NA	
	Cyclone D	Planer shavings cyclone	Baghouse	BHH	
	Cyclone E	Moulder shavings cyclone			
	Cyclone F	Baghouse purge air cyclone			
		Conveyors	Material handling hog fuel, sawdust, chips, shavings	None	NA
Sawing & Debarking	S&D	Log sawmills: sawing and debarking	None	NA	
Unpaved Roads	UPR	Unpaved roads	Watering	NA	
Aggregate Insignificant	AI	CO, VOCs, & PM/PM <sub>10</sub> emissions from the Cleaver Brooks boilers (B-4, B-5), fire pump engine & filing room cyclone	None	NA	

## EMISSION LIMITS AND STANDARDS, TESTING, MONITORING AND RECORDKEEPING REQUIREMENTS

The following tables and conditions contain the applicable requirements along with testing, monitoring and recordkeeping requirements for the emissions units to which those requirements apply.

### Facility-Wide Requirements

**Table 1: Summary of Facility-Wide Emission Limits and Standards**

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Monitoring Requirement	Monitoring Condition
340-208-0210(1)	4	Fugitive Emissions	Minimize	Fugitive Dust Control Plan	5
				Complaint Investigation	8
340-208-0300	6	Air Contaminants	Not Cause a Nuisance	Complaint Investigation	8
340-208-0450	7	PM >250 $\mu$	No Observable Deposition Off Site	Complaint Investigation	8
40 CFR 80.510(b)	9.a	Ultra-Low Sulfur Diesel	$\leq 0.0015\%$	Billing Statement or Purchase Receipt	10
340-228-0110(1)	9.b	ASTM Grade 1 Fuel Oil	$\leq 0.3\%$ Sulfur by Weight	Vendor Certificate or Periodic Laboratory Analysis of Composite Samples	10
340-228-0110(2)	9.c	ASTM Grade 2 Fuel Oil and Used Oil Sulfur Content	$\leq 0.5\%$ Sulfur by Weight	Vendor Certificate or Periodic Laboratory Analysis of Composite Samples	10
40 CFR Part 68	11	Risk Management	Risk Management Plan	NA	11

4. Applicable Requirement: The permittee must not cause 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.
  - a. Such reasonable precautions must include, but not be limited to the following: [OAR 340-208-0210(1)]
    - i. 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;
    - ii. Application of water, or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;

- iii. Full or partial enclosure of materials stockpiles in cases where application of water or chemicals are not sufficient to prevent particulate matter from becoming airborne;
  - iv. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
  - v. Adequate containment during sandblasting or other similar operations;
  - vi. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; and
  - vii. Prompt removal from paved streets of earth or other material that does or may become airborne.
- b. Upon request by DEQ, the permittee must develop a fugitive emission control plan for approval by DEQ if the above precautions are not adequate, and implement the plan whenever fugitive emissions leave the property for more than 18 seconds in a six-minute period. [OAR 340-218-0050(3)(a)]
5. Monitoring Requirement: At least once each week when the facility is operating, at downwind property boundaries, the permittee must visually survey the plant for any sources of excess fugitive emissions. For the purpose of this survey, excess fugitive emissions are considered to be any visible emissions that leave the plant site boundaries for more than 18 seconds in a six-minute period. The person conducting the observation must follow the procedures of EPA Method 22. If sources of visible emissions are identified, the permittee must:
- a. Immediately take corrective action to minimize the fugitive emissions, including but not limited to those actions identified in Condition 4; or
  - b. Recordkeeping: The permittee must maintain records of the fugitive emissions surveys, the date and time of the surveys, corrective actions (if necessary), and/or the results of any EPA Method 22 tests.
  - c. If the observer is unable to conduct the survey due to weather conditions such as fog, heavy rain or snow, the observer shall note such conditions on the data observation sheet and make at least three attempts to conduct the surveys at approximately 2-hour intervals. If no observations are made for that day, the observer shall continue to attempt to conduct the survey daily until a valid observation is completed.

#### **Nuisance Conditions**

6. ~~Applicable Requirement: The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel. [OAR 340-208-0300] This condition is enforceable only by the state.~~
7. ~~Applicable Requirement: The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. [OAR 340-208-0450] This condition is enforceable only by the state.~~



8. ~~Monitoring Requirement: The permittee must maintain a log of each complaint received by the permittee in person, in writing, by telephone or through other means that specifically refer to air pollution or odor concerns associated with and during the operation of the permitted facility. Documentation must include date of contact, time and description of observed pollution or odor condition, location of receptor, status of plant operation during the observed period, and time of response to complainant. A plant representative must immediately 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. This condition is only enforceable only by the state. [OAR 340-218-0050(3)(a)]~~

### Fuels

9. Applicable Requirement: The permittee must not burn any fuel other than biomass (primarily bark and wood from the sawmill operations), natural gas, propane, butane or ASTM grade 1 or 2 fuel oil. If the permittee burns any of the fuels listed below, the sulfur content cannot exceed:
- a. 0.0015% sulfur by weight for ultra-low sulfur diesel; [40 CFR 80.510(b)]
  - b. 0.3% sulfur by weight for ASTM Grade 1 fuel oil; [OAR 340-228-0110(1)]
  - c. 0.5% sulfur by weight for ASTM Grade 2 fuel oil; [OAR 340-228-0110(2)]
10. Monitoring Requirement: The permittee must monitor the sulfur content of each shipment of fuel received by: [OAR 340-218-0050(3)(a)]
- a. Obtaining a billing statement or purchase receipt to indicate that the oil burned is ultra-low sulfur diesel (ULSD), which has a sulfur content no greater than 0.0015% from each vendor for each shipment of fuel received;
  - b. Obtaining a sulfur content certificate from each vendor for each shipment of fuel received; or
  - c. Analyzing or having analyzed by a contract laboratory a representative sample taken by the permittee from each shipment of fuel received.

### Accidental Release Prevention/Risk Management Plan

11. ~~Applicable Requirement: Should this stationary source become subject to the accidental release prevention regulations in 40 CFR Part 68, then the permittee must submit a risk management plan (RMP) by the date specified in 40 CFR 68.10 and comply with the plan and all other applicable Part 68 requirements. [40 CFR Part 68]~~

**Table 2: Boilers B-1 and B-2 Requirements**

Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Averaging Time	Testing Condition	Monitoring Condition
340-208-0110(3)(c)(A)	12	Visible Emissions	40% or 20% Opacity	6-Minute Block Average	NA	13, 14, 15
340-228-0210(2)(a)(B)(ii)	16	PM	0.15 gr/dscf @ 12% CO <sub>2</sub> when Burning Wood	Avg. of 3 Test Runs	43, 45	17, 18, 19
40 CFR 63.11237	20	Allowable Fuel	Only Burn Biomass	NA	NA	22
40 CFR 63.11223(b)	21	Conduct Boiler Tune-up	Every 2 Years	NA	NA	22, 23

12. Applicable Requirement: The permittee must comply with the following visible emission limits for wood-fired Boilers B-1 and B-2: [OAR 340-208-0110(3)(a) and (3)(c)(A)]

- a. Any visible emissions may not equal or exceed an average of 20 percent opacity, except that visible emissions may equal or exceed an average of 20 percent opacity but may not equal or exceed 40 percent opacity, as the average of all six-minute blocks during grate cleaning operations provided the grate cleaning is performed in accordance with a grate cleaning plan approved by DEQ.
- b. The visible emissions standards in this condition are based on the average of 24 consecutive observations recorded at 15-second intervals, or more frequently as allowed under Condition 12.b.ii, which comprise a six-minute block. Six-minute blocks need not be consecutive in time, and in no case may two blocks overlap. For each set of 24 observations, the six-minute block average is calculated by summing the opacity of the 24 observations and dividing the sum by 24. Six-minute block averages are measured by: [OAR 340-208-0110(2)]
  - i. EPA Method 9; or
  - ii. A continuous opacity monitoring system (COMS) installed and operated in accordance with the DEQ Continuous Monitoring Manual or 40 CFR Part 60; or
  - iii. An alternative monitoring method approved by DEQ that is equivalent to EPA Method 9.

13. Monitoring Requirement: Reserved

14. Monitoring and Recordkeeping Requirement(s): The permittee must maintain a log of grate cleaning for wood or biomass-fired boilers that includes the date and length of time of grate cleaning. The log must be kept onsite and be made available upon request. [OAR 340-218-0050(3)(a)]



15. Monitoring Requirement: The permittee must monitor visible emissions from the stack of the steam plant (emission units B1 and B2) by conducting an EPA Method 9 test to determine compliance with the opacity standard in Condition 12. The permittee must record the hourly steam production rate during each test.
- The EPA Method 9 tests must be conducted at least once during each quarter of operation.
  - If any of the observations during the Method 9 test are equal to or greater than 40% opacity, the observation period shall continue until 60 minutes of observations have been completed or until an exceedance of Condition 12 has been documented, whichever period is shorter.
  - If the visible emissions are greater than 20% opacity as a six-minute average, the permittee shall investigate the cause of the higher than normal emissions and take corrective action to reduce the emissions. Corrective action must be initiated within 24 hours, or the permittee shall notify DEQ as to why corrective action cannot be performed. The permittee must keep records of the corrective actions.
  - If any test result exceeds the applicable opacity standard, the test frequency must be daily for 5 consecutive days following the exceedance. If the results of the daily tests are all less than the applicable opacity standard, the test frequency must be the same as before the exceedance occurred.
  - If, on a regularly scheduled test day, it is not possible to conduct an EPA Method 9 test due to inclement weather conditions or interference from other fugitive sources, the permittee must make three attempts during the day at approximately 10 a.m., noon, and 2 p.m. If it is still not possible to conduct the test, the permittee must perform the test the following day. The permittee must record in a log the reason for not conducting the test on a regularly scheduled test day.
  - All EPA Method 9 tests must be performed during periods that Boilers B-1 or B-2 are in operation.
16. Applicable Requirement: The permittee may not emit particulate matter emissions from Boilers B-1 and B-2 in excess of 0.15 grains per dry standard cubic foot. [OAR 340-228-0210(2)(a)]
- Compliance with the emissions standards in this condition is determined using DEQ Method 5, or an alternative method approved by DEQ.
  - For fuel burning equipment that burns wood fuel by itself or in combination with any other fuel, the emission results are corrected to 12% CO<sub>2</sub>.
17. Monitoring Requirement: The permittee shall operate a pressure gauge and record the pressure drop ( $\Delta P$ ) of each boiler multiclone (B-1, B-2). The permittee shall also monitor the secondary current (mA) in the electrostatic precipitator (ESP).
- The permittee shall take corrective action if  $\Delta P$  from the multiclone is outside the range of 0.5" H<sub>2</sub>O to 4" H<sub>2</sub>O other than during startup and shut down. [OAR 340-218-0050]

- b. The permittee shall take corrective action if the ESP 30-day rolling 1-hour average current is outside the range of 300 mA to 1,000 mA other than startup and shutdown.
  - c. Readings of multiclone  $\Delta P$  and ESP 30-day rolling 1-hr average secondary current (mA) shall be taken once per day and recorded in the boiler operating log.
  - d. All excursions of the  $\Delta P$  or mA operating ranges and the corrective action taken to return the multiclone or ESP to highest and best practicable treatment and control shall be recorded in the boiler operating log.
  - e. An exceedance of the  $\Delta P$  or mA operating ranges is not necessarily a violation of the particulate matter emission standard. [OAR 340-212-0200 through OAR 340-212-0280]
18. Monitoring Requirement: During each regularly scheduled maintenance outage of the boilers (B-1, B-2) or at least once per year, the permittee shall inspect the multiclones and electrostatic precipitator on the boilers (B-1, B-2) for physical degradation that could affect the performance of the control device, including, but not limited to, the individual cyclone dimensions and any items recommended by the ESP manufacturer. The multiclone or ESP shall be repaired if damaged to ensure efficient operation. The results of the inspection and any repair activities shall be recorded in a log. [OAR 340-212-0200 through OAR 340-212-0280]
19. Monitoring Requirement: The permittee shall calibrate, maintain, operate and record the output of a continuous monitoring system for measuring the residual oxygen of each boiler (B-1, B-2) in accordance with the manufacturer's written instructions.
- a. The permittee shall take corrective action if residual oxygen from the hog fuel boiler is outside the range of 6% to 13% other than during startup and shut down. [OAR 340-218-0050]
  - b. Real time data shall be displayed at least once every minute that the boiler is in operation.
  - c. Running three clock-hour averages of the data shall be recorded at the end of each clock hour that the boilers are in operation. Minimum data availability shall be 90% of the total operating hours during any calendar year. Monitor availability shall be determined excluding periods of calibrations and routine maintenance.
  - d. All excursions of the residual oxygen action levels and the corrective action taken to return the boilers to highest and best practicable treatment and control shall be recorded in a boiler operating log.
  - e. An exceedance of the residual oxygen parameter operating ranges is not necessarily a violation of the particulate matter emission standard. [OAR 340-212-0200 through OAR 340-212-0280]

**Boiler Area Source MACT – 40 CFR Part 63 Subpart JJJJJ**

20. ~~The permittee may only burn biomass in Boilers B-1 and B-2. Biomass means any biomass-based solid fuel that is not a solid waste as defined in 40 CFR 241.3. This includes, but is not limited to: [40 CFR 63.11237]~~



- a. ~~Wood residue and wood products, including trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, seraps, slabs, millings and shavings;~~
  - b. ~~Animal manure, including litter and other bedding materials;~~
  - e. ~~Vegetative agricultural and silvicultural materials, including logging residues (slash), nut and grain hulls and chaff, bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds.~~
21. ~~The permittee must conduct a performance tune-up every two years as follows: [40 CFR 63.11201(b); 63.11214(b), Table 2, #6; and 63.11223(b)]~~
- a. ~~Inspect the burner and clean or replace any components of the burner as necessary. The burner inspection may be delayed until the next scheduled boiler shutdown, but each burner must be inspected at least once every 36 months;~~
  - b. ~~Inspect the flame pattern and adjust the burner as necessary to optimize the flame pattern. Any adjustment must be consistent with the manufacturer's specifications for the burner, if available;~~
  - e. ~~Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly;~~
  - d. ~~Optimize the total emissions of carbon monoxide. This optimization must be consistent with the manufacturer's specifications, if available;~~
  - e. ~~Measure the exhaust concentration of carbon monoxide (ppmv) and oxygen (volume %), before and after the adjustments are made. Measurements may be made either on a dry or wet basis, as long as it is the same basis before and after any adjustments are made. Measurements may be taken using a portable CO analyzer;~~
  - f. ~~If the boiler is not operating on the required date for the tune-up, the tune-up must be conducted within 30 days of startup;~~
  - g. ~~Each biennial tune-up must be conducted no more than 25 months after the previous tune-up.~~
22. ~~The permittee must maintain biennial reports containing the tune-up information as required in Condition 21, specifically: [40 CFR 63.11223(b)(6)(i) through (iii) and 63.11225(e)(2)(i)]~~
- a. ~~Identification of the boiler, date of tune up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned.~~
  - b. ~~The CO concentrations in the exhaust in ppmv, and oxygen %, measured before and after the tune-up, as detailed in Condition 21.e;~~
  - e. ~~A description of any corrective actions taken as part of the tune-up;~~
  - d. ~~The type and amount of fuel used each month over the 12 months prior to the biennial tune-up;~~
  - e. ~~These records must be maintained onsite, in a form suitable for inspection and/or submittal upon request.~~

23. ~~The permittee must prepare a biennial compliance report and include it with the annual report specified in Condition 58.b. The report must include the following: [40 CFR 63.11225(b)(1) and (2)]~~
- ~~a. Company name and address;~~
  - ~~b. Statement by a responsible official, with the official's name, title, phone number, e-mail address and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all of the relevant standards and other requirements of 40 CFR Part 63, Subpart JJJJJ. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:~~
    - ~~i. "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."~~
    - ~~ii. If applicable, for units that do not qualify for a statutory exemption as provided in Section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."~~
    - ~~iii. "This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."~~
24. ~~If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within 40 CFR Part 63 Subpart JJJJJ, in the boiler becoming subject to this subpart, or in the boiler switching out of this subpart due to a fuel change that results in the boiler meeting the definition of gas-fired boiler, as defined in §63.11237, or you have taken a permit limit that resulted in you becoming subject to this subpart or no longer being subject to this subpart, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must be made in accordance with 40 CFR 63.11225(g). [40 CFR 63.11225(g)]~~
25. ~~40 CFR Part 63 General Provisions according to Table 8 of Subpart JJJJJ, incorporated by reference. Refer to the table at the end of this permit. [40 CFR 63.11235]~~

**Table 3: Boilers B-3, B-4 and B-5, Kilns, Cyclones and Baghouse Requirements**

Emission Unit	Applicable Requirement	Condition Number	Pollutant/Parameter	Limit/Standard	Monitoring Requirement	Monitoring Condition
B-3, B-4 & B-5	340-208-0110(3)(a)	26	Visible Emissions	20% Opacity, 6-Minute Block Average	VE Periodic Monitoring, ST	28, 29, 30, 43
	340-228-0210(2)(b)(B)	27	PM	0.14 gr/dscf @ 50% Excess Air		
Kilns	340-208-0110(3)(a)	26	Visible Emissions	20% Opacity, 6-Minute Block Average	VE Periodic Monitoring	34
	340-226-0210(2)(b)(B)	31.b	PM	0.14 gr/dscf, Avg. of 3 Test Runs		
	ACDP 18-0005 Conditions 4.1 & 4.2	36	VOC	Work Practices	O & M Plan	36
Cyclones A, B	340-208-0110(3)(a)	26	Visible Emissions	20% Opacity, 6-Minute Block Average	VE Periodic Monitoring	34, 35
	Cyclones A, B 340-226-0210(2)(b)(B)	31.b	PM	0.14 gr/dscf, Avg. of 3 Test Runs		
	Cyclones A, B 340-226-0310	32	PM	See OAR 340-226-8010, Avg. of 3 Test Runs		
Baghouse	340-208-0110(3)(a)	26	Visible Emissions	20% Opacity, 6-Minute Block Average	VE Periodic Monitoring	34, 35
	340-226-0210(2)(c)	31.a	PM	0.10 gr/dscf, Avg. of 3 Test Runs		

26. Applicable Requirement: The permittee must comply with the following visible emission limits for Boilers B-3, B-4 and B-5, Kilns, Baghouse and Cyclones A, B: [OAR 340-208-0110(3)(a)]

- a. Any visible emissions may not equal or exceed an average of 20 percent opacity; and
- b. The visible emissions standards in this condition are based on the average of 24 consecutive observations recorded at 15-second intervals, which comprise a six-minute block. Six-minute blocks need not be consecutive in time and in no case may two blocks overlap. For each set of 24 observations, the six-minute block average is calculated by summing the opacity of the 24 observations and dividing the sum by 24. Six-minute block averages are measured by EPA Method 9 or an



~~alternative monitoring method approved by DEQ that is equivalent to EPA Method 9.~~

### **~~Boilers B-3, B-4 and B-5~~**

27. ~~Applicable Requirement:~~ The permittee may not emit particulate matter emissions from Boilers B-3, B-4 or B-5 in excess of 0.14 grains per dry standard cubic foot corrected to 50% excess air. [OAR 340-228-0210(2)(b)(B)]
28. ~~Testing Requirement:~~ Compliance with the emissions standards in Condition 27 is determined using DEQ Method 5, or an alternative method approved by DEQ. Testing is not required for Building Heat units B-4 and B-5. Testing is not required for Boiler B-3 except as required by Condition 43.
29. ~~Monitoring Requirement:~~ Once during each quarter, when Boiler B-3 is operating on oil, the permittee must monitor visible emissions from the stack of Boiler B-3 by conducting an EPA Method 9 test. The permittee shall record the hourly fuel usage during each test.
- a. ~~This monitoring requirement only applies if Boiler B-3 was operated on oil more than 25 hours during the previous quarter.~~
  - b. ~~If the permittee does not operate the boiler on oil during this quarter that the testing would apply, then the Method 9 test is not required; the permittee is not required to fire the boiler on oil solely for the purpose of conducting this test.~~
30. ~~Monitoring Requirement:~~ At any time that the permittee is burning natural gas in Boilers B-3, B-4 or B-5, the permittee is not required to conduct any visible emissions or particulate matter monitoring because it is extremely unlikely that these standards could be violated while burning natural gas. The permittee must maintain records of the type of fuels being burned on an hourly basis. If visible emissions are to be measured for any reason, the visible emissions must be measured in accordance with DEQ's Source Sampling Manual.

### **~~Kilns, Cyclones and Baghouse~~**

31. ~~Applicable Requirement:~~ The permittee may not emit particulate matter emissions from the Kilns, Cyclones and baghouse in excess of the following limits:
- a. ~~0.10 grains per dry standard cubic foot from the baghouse. [OAR 340-226-0210(2)(e)]~~
  - b. ~~0.14 grains per dry standard cubic foot from the kilns and Cyclones A and B. [OAR 340-226-0210(2)(b)(B)]~~
  - c. ~~Compliance with the emissions standards in this condition is determined using:~~
    - i. ~~DEQ Method 5;~~
    - ii. ~~DEQ Method 8, as approved by DEQ for sources with exhaust gases at or near ambient conditions;~~
    - iii. ~~An alternative method approved by DEQ.~~



32. ~~Applicable Requirement:~~ The permittee shall not cause or allow the emission of particulate matter in any one hour from the Cyclones A and B in excess of the amount shown in OAR 340-226-8010, for the process weight allocated to that process. [OAR 340-226-0310]
33. ~~Testing Requirement:~~ Testing is not required for the Kilns, Cyclones and baghouse. However, if testing were performed for compliance purposes, the permittee would be required to use the test methods identified in OAR 340-208-110, OAR 340-226-210 and perform the testing in accordance with DEQ's Source Sampling Manual.
34. ~~Monitoring Requirement:~~ One time each quarter of operation the permittee shall conduct a visible emission survey of the baghouse and cyclones, and one time each semi-annual certification period the permittee shall conduct a visible emission survey of the Kilns. The survey must be a ten (10) minute visible emission survey using EPA Method 22.
- a. All visible emissions observations shall be conducted during normal operation of the emissions device.
  - b. If visible emissions, excluding condensed water vapor, from an individual monitoring point are detected for more than 5% (18 seconds) of the survey time, an EPA Method 9 test shall be conducted within 24 hours on that monitoring point in accordance with DEQ's Source Sampling Manual and as described in Condition 26.
35. ~~Monitoring Requirement:~~ In addition to the visible emissions monitoring required by Condition 34, the permittee shall inspect the cyclones and baghouse at least once each semi-annual certification period for structural damage. If damage is detected that could affect the performance of the cyclone or baghouse, the permittee shall initiate repairs as soon as possible.
36. ~~Applicable Requirement:~~ The permittee must follow proper work practices to minimize VOC emissions from the lumber drying kilns. The permittee must continue to implement the operation and maintenance plan. The plan must be maintained on site and reviewed and updated at least annually. [ACDP 18-0005 Conditions 4.1 and 4.2]
37. ~~Monitoring Requirement:~~ The Kiln operating temperatures (°F, dry bulb) and wood species must be measured and recorded when drying lumber. The records shall be sufficient to support calculations in Condition 42 to demonstrate compliance with the VOC PSEL.

### Insignificant Activities Requirements

38. ~~Applicable Requirement:~~ DEQ acknowledges that insignificant emissions units (IEUs) identified by rule as either categorically insignificant activities or aggregate insignificant emissions as defined in OAR 340-200-0020 exist at facilities required to obtain an Oregon Title V Operating Permit. IEUs must comply with all applicable requirements. In general, the requirements that could apply to IEUs are incorporated as follows:

- a. ~~OAR 340-208-0110 (20% opacity)~~
- b. ~~OAR 340-226-0210 (0.10 gr/dscf for non-fugitive, non-fuel burning equipment)~~
- c. ~~OAR 340-226-0310 (process weight limit for non-fugitive, non-fuel burning process equipment)~~
- d. ~~OAR 340-228-0210 (0.10 gr/dscf corrected to 12% CO<sub>2</sub> or 50% excess air for fuel burning equipment)~~

39. ~~Emergency stationary reciprocating internal combustion engines (RICE) are subject to the following requirements. This includes the fire pump engine: [40 CFR 63.6640(f)]~~

- a. ~~For each emergency stationary RICE, the permittee must:~~
  - i. ~~Change oil and filter every 500 hours of operation or annually, whichever comes first; [40 CFR 63.6603(a), table 2d(4)(a)]~~
  - ii. ~~Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; [40 CFR 63.6603(a), table 2d(4)(b)]~~
  - iii. ~~Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary; [40 CFR 63.6603(a), table 2d(4)(c)]~~
  - iv. ~~During periods of startup, minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply; and [40 CFR 63.6603(a), Table 2d]~~
- b. ~~The permittee must install a non-resettable hour meter on each emergency stationary RICE, if one is not already installed. [40 CFR 63.6625(f)]~~
- c. ~~The permittee must operate and maintain the stationary RICE according to the manufacturer's emission related operation and maintenance instructions. [40 CFR 63.6640(a), Table 6(9)]~~
- d. ~~Operating conditions: [40 CFR 63.6640(f)(2)]~~
  - i. ~~There is no time limit on the use of emergency stationary RICE in emergency situations.~~
  - ii. ~~Emergency stationary RICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.~~
  - iii. ~~Emergency stationary RICE may be operated for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another utility.~~
- e. ~~The permittee must keep records of the following:~~
  - i. ~~Maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE and after-treatment control device (if any) was~~

~~operated and maintained according to Conditions 39.a.i to a.iii and 39.e. [40 CFR 63.6655(e)(3)]; and~~

- ii. ~~The hours of operation of each emergency stationary RICE 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. If the engines are used for demand response operation, the permittee must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. [40 CFR 63.6655(f)]~~

40. ~~Unless otherwise specified in this permit or an applicable requirement, DEQ is not requiring any testing, monitoring, recordkeeping or reporting for the applicable emissions limits and standards that apply to IEUs. However, if testing were performed for compliance purposes, the permittee would be required to use the test methods identified in and perform the testing in accordance with DEQ's Source Sampling Manual.~~

#### PLANT SITE EMISSION LIMITS

41. The permittee must not cause or allow plant site emissions to exceed the following limits for any 12 consecutive calendar month period: [OAR 340-222-0035 through OAR 340-222-0041]

Pollutant	Plant Site Emission Limit (tons/yr)	Unassigned Emissions (tons/yr)
PM	100	82
PM <sub>10</sub>	77	78
PM <sub>2.5</sub>	67	27
SO <sub>2</sub>	6	0
NO <sub>x</sub>	99	0
CO	462	101
VOC	210	0
GHG (CO <sub>2</sub> e) (excluding biomass CO <sub>2</sub> )	9,456	0
GHG (CO <sub>2</sub> e) (including biomass CO <sub>2</sub> )	132,757	0
Single HAP (tons)	9	NA
Combined HAPs (tons)	24	NA

The permittee may only use Unassigned Emissions after any necessary construction (OAR 340-218-0190) and operating permit revision applications (OAR 340-218-0120 through 340-218-0180) have been approved by DEQ. [OAR 340-222-055]

**Monitoring Requirement: [OAR 340-218-0050(3)]**

42. The permittee must determine compliance with the Plant Site Emission Limits established in Condition 41 of this permit by conducting monitoring and calculations for each 12-month period in accordance with the following procedures, test methods and frequencies except for GHGs:
- a. The permittee must calculate emissions using the following formula, process parameters and emission factors:

$$E = \sum P_{eu} \times EF_{eu} \times K$$

Where:

E	=	Pollutant emissions in lbs/month and tons/year.
$\sum$	=	Symbol representing “summation of”;
$P_{eu}$	=	Process parameter (throughput) identified in the table below;
$EF_{eu}$	=	Emission factor identified for each emissions unit and pollutant in the table below for criteria pollutants and Attachment 1 for HAPs;
K	=	Conversion constant: 1 lb/lb for monthly emissions calculations; 1 ton/2,000 lbs for annual emissions calculations.



**Emission Factors:**

EU Code	EU Description	Process Description	Throughput Type (Units)	Emission Factors (lb/throughput unit)						
				CO	NO <sub>x</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	VOC
B1-B2	Wood-Fired Boilers	Hogged Fuel	Steam (1000 lbs)	1.2	0.24	0.20	0.16	0.15	0.01	0.038
B3	Steam Plant	Natural Gas	Natural Gas (million ft <sup>3</sup> )	84	100	7.6	7.6	7.6	1.7	5.5
B3	Steam Plant	Oil	Distillate Oil (1000 gal.)	5	20	2	2	1.36	14.2	0.25
B4-B5	Building Heat	Natural Gas	Natural Gas (million ft <sup>3</sup> )	NA	100	2.5	2.5	2.5	1.7	NA
B4-B5	Building Heat	Oil	Distillate Oil (1000 gal.)	NA	20	2	2	1.7	14.2	NA
Conveyors	Material Handling	Hogged Fuel, Sawdust, Chips	Wood/Bark (tons)	NA	NA	0.1	0.036	0.02	NA	NA
Conveyors	Material Handling	Chip Rail Loadout	Chips (tons)	NA	NA	0.1	0.05	0.025	NA	NA
Conveyors	Material Handling	Shavings Handling	Wood/Bark (tons)	NA	NA	0.25	0.09	0.045	NA	NA
Cyclones A, B	Material Handling	Hogged Fuel	Wood/Bark (tons)	NA	NA	0.2	0.19	0.16	NA	NA
Cyclones D,E,F	Material Handling	Shavings/Baghouse	Wood (tons)	NA	NA	0.001	0.001	0.001	NA	NA
Kilns	Kilns	Ponderosa Pine	Lumber (MBF)	NA	NA	0.02	0.02	0.014	NA	2.70
		Burnt Ponderosa Pine	Lumber (MBF)							0.15
		Lodgepole Pine	Lumber (MBF)							1.38
		Douglas Fir	Lumber (MBF)							1.12
		White Fir	Lumber (MBF)							0.76
S&D	Sawing & Debarking	Fugitives	Wood/Bark (tons)	NA	NA	0.005	0.003	0.0015	NA	NA
S&D	Sawing & Debarking	Building Vents	Hours of Operation	NA	NA	0.1	0.1	0.05	NA	NA
UPR	Unpaved Roads	Fugitives	Vehicle Miles Traveled (VMT)	NA	NA	0.05	0.019	0.0019	NA	NA

- b. VOC factors are as propane. Kiln VOC factors are based on kiln operating temperatures of 200° F or less.
- c. The Lodge Pole Pine emission factors apply to any other species of wood not listed above.
- d. The permittee shall monitor Boiler B-1 and B-2 steam production and record the total for each month.
- e. The permittee shall calibrate and maintain the steam gauge in accordance with the manufacturer's instructions. Calibration and maintenance activities shall be recorded in a log.
- f. The emission factors listed in Condition 42 are not enforceable limits unless otherwise specified in this permit. Compliance with PSELS must only be determined by the calculations contained in this Condition.

**Testing Requirement: [OAR 340-218-0050(3)]**

43. The permittee shall conduct a source test at compliance demonstration points B-1, B-2 and B-3. The following schedule, procedures and test methods shall be used, unless DEQ approves an alternative:

- a. Boilers B-1 and B-2 shall be tested no later than 12 months prior to permit expiration, or as approved by DEQ in writing, for the following pollutants:
  - i. Particulate matter using Oregon Method 5 for demonstrating compliance with permit Condition 16 and emission factor verification;
  - ii. Nitrogen oxides using EPA Method 7e for emission factor verification; and
  - iii. Carbon monoxide using EPA Method 10 for emission factor verification;
- b. Boiler B-3 particulate emissions shall be tested within 12 months of any calendar year the boiler is operated more than 100 hours per year on oil.
- c. During tests on Boilers B-1 and B-2 the permittee shall record the following information for the boiler being tested:
  - i. Steam flow (lbs/hr);
  - ii. Furnace O<sub>2</sub>;
  - iii. Multiclone pressure drop (inches water);
  - iv. ESP secondary voltage and current, and
  - v. Fuel characteristics including moisture content (%), species, approximate percentage of wood and bark, and the percentage by weight that passes a 1/8" sieve.
- d. During tests on Boiler B-3, the permittee shall record the following information:
  - i. Type of fuel; and
  - ii. Fuel usage gallons/hr;
- e. The particulate emission concentration of Boilers 1 and 2 corrected to 12% CO<sub>2</sub> shall be computed for each run using the following equation:

$$C_{CO_2} = c_s(12/\%CO_2)$$

Where:

$$\begin{aligned} C_{CO_2} &= \text{Emission concentration corrected to 12\% CO}_2 \\ &\quad \text{(grains/dscf);} \\ c_s &= \text{Measured particulate concentration, (grains/dscf);} \\ \%CO_2 &= \text{Percent carbon dioxide measured in stack gas (\%).} \end{aligned}$$

- f. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (c_s Q_{sd}) / PK$$

Where:

$$\begin{aligned} E &= \text{Emission rate of particulate, (lbs/1,000 lbs-steam or} \\ &\quad \text{lbs/1,000 gal);} \\ c_s &= \text{Measured concentration, (grains/dscf);} \\ Q_{sd} &= \text{Exhaust gas flow rate, (dscf/hr);} \end{aligned}$$



P = Process parameter, (1,000 lbs-steam/hr or 1,000 gal/hr);  
K = Conversion constant (7,000 grains/lb).

## EMISSION FEES

44. ~~Emission fees will be based on the Plant Site Emissions Limits, unless permittee elects to report actual emissions for one or more permitted processes/pollutants. [OAR 340-220-0090]~~

## GENERAL TESTING REQUIREMENTS

45. Unless otherwise specified in this permit, the permittee must conduct all testing in accordance with DEQ's Source Sampling Manual. [OAR 340-212-0120]
- a. Unless otherwise specified by a state or federal regulation or as approved by DEQ written correspondence, the permittee must submit a source test plan to DEQ at least 30 days prior to the date of the test. The test plan must be prepared in accordance with DEQ's Source Sampling Manual and address any planned variations or alternatives to prescribed test methods. Permittee should be aware, if significant variations are requested, it may require more than 30 days for DEQ to grant approval and may require EPA approval in addition to approval by DEQ.
  - 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.
  - c. Unless otherwise specified by permit condition or DEQ approved source test plan, all compliance source tests must be performed as follows:
    - i. At least 90% of the design capacity for new or modified equipment;
    - ii. At least 90% of the maximum operating rate for existing equipment; or
    - iii. For 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.
  - d. Each source test must consist of at least three (3) test runs and the emissions results must be reported as the arithmetic average of all valid test runs. If for reasons beyond the control of the permittee a test run is invalid, DEQ may accept two (2) test runs for demonstrating compliance with the emission limit or standard.
  - e. Source test reports prepared in accordance with DEQ's Source Sampling Manual must be submitted to DEQ within 60 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 or by DEQ in writing.

## **GENERAL MONITORING AND RECORDKEEPING REQUIREMENTS**

### **General Monitoring Requirements**

46. The permittee must not knowingly render inaccurate any required monitoring device or method. [OAR 340-218-0050(3)(a)(E)]
47. The permittee must use the same methods to determine compliance as those used to determine actual emissions for fee purposes and can be no less rigorous than the requirements of OAR 340-218-0080. [OAR 340-218-0050(3)(a)(F)]
48. The permittee must comply with the monitoring requirements on the date of permit issuance unless otherwise specified in the permit or an applicable requirement. [OAR 340-218-0050(3)(a)(G)]

### **General Recordkeeping Requirements**

49. The permittee must maintain the following general records of testing and monitoring required by this permit: [OAR 340-218-0050(3)(b)(A)]
  - a. The date, place as defined in the permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses;
  - f. The operating conditions as existing at the time of sampling or measurement; and
  - g. The records of quality assurance for continuous monitoring systems (including but not limited to quality control activities, audits, calibration drift checks).
50. Unless otherwise specified by permit condition, the permittee must make every effort to maintain 100 percent of the records required by the permit. If information is not obtained or recorded for legitimate reasons (e.g., the monitor or data acquisition system malfunctions due to a power outage), the missing record(s) will not be considered a permit deviation provided the amount of data lost does not exceed 10% of the averaging periods in a reporting period or 10% of the total operating hours in a reporting period, if no averaging time is specified. Upon discovering a required record is missing, the permittee must document the reason for the missing record. In addition, any missing record that can be recovered from other available information will not be considered a missing record. [OAR 340-214-0110, 340-214-0114, and 340-218-0050(3)(b)]
51. The permittee must comply with the recordkeeping requirements on the date of permit issuance unless otherwise specified in the permit or an applicable requirement. [OAR 340-218-0050(3)(b)(C)]

52. Unless otherwise specified, the permittee must retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings (or other original data) for continuous monitoring instrumentation, and copies of all reports required by the permit. All existing records required by the previous Air Contaminant Discharge Permit or Oregon Title V Operating Permit must also be retained for five (5) years from the date of the monitoring sample, measurement, report or application. [OAR 340-218-0050(3)(b)(B)]

### Source Specific Recordkeeping Requirements

53. The permittee shall maintain the following specific records of required monitoring information:
- a. Sulfur content of distillate fuels (Condition 10);
  - b. Grate cleaning records for Boilers B-1 and B-2 (Condition 14);
  - c. Results of Boilers B-1 and B-2 visible emissions tests (Condition 15);
  - d. Multiclone and ESP monitoring records for Boilers B-1 and B-2 (Condition 17);
  - e. Multiclone and ESP inspection records for Boilers B-1 and B-2 (Condition 18);
  - f. Residual oxygen monitoring records for Boilers B-1 and B-2 (Condition 19);
  - g. Records required by the area source boiler NESHAP, 40 CFR 63 Subpart JJJJJ (Condition 22);
  - h. Results of Boiler B-3 visible emissions surveys, if required for burning oil (Condition 29);
  - i. Records of fuel used in Boilers B-3, B-4, B-5 (Condition 30);
  - j. Results of baghouse, cyclone and kiln visible emissions surveys (Condition 34);
  - k. Results of baghouse and cyclone inspections (Condition 35);
  - l. Records of kiln temperature and wood species monitoring (Condition 37);
  - m. Records of emergency RICE (fire pump) maintenance and operation (Condition 39.e)
  - n. Monthly and annual amount of steam produced boilers (Condition 42);
  - o. Monthly and annual amount of lumber dried categorized by species and type (Condition 42);
  - p. Monthly and annual amount of throughput (wood/bark) for Material Handling Sources, Cyclones, and Sawing & Debarking (Condition 42);
  - q. Pollutant emissions as calculated according to (Condition 42);
  - r. Excess Emissions (Condition 54); and
  - s. Permit Deviations (Condition 55)



## REPORTING REQUIREMENTS

### General Reporting Requirements

54. Excess Emissions Reporting: The permittee must report all excess emissions as follows: [OAR 340-214-0300 through 340-214-0360]
- a. Immediately (see Condition 54.h) notify DEQ of an excess emission event by phone, email or facsimile; and
  - b. Within 15 days of the excess emissions event, submit a written report that contains the following information: [OAR 340-214-0340(1)]
    - i. The date and time of the beginning of the excess emissions event and the duration or best estimate of the time until return to normal operation;
    - ii. The date and time the permittee notified DEQ of the event;
    - iii. The equipment involved;
    - iv. Whether the event occurred during startup, shutdown, maintenance or as a result of a breakdown, malfunction or emergency;
    - v. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown or maintenance activity were followed;
    - vi. The magnitude and duration of each occurrence of excess emissions during the course of an event and the increase over normal rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations);
    - vii. The final resolution of the cause of the excess emissions; and
    - viii. Where applicable, evidence supporting any claim that emissions in excess of technology-based limits were due to any emergency pursuant to OAR 340-214-0360.
  - c. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must immediately take action to minimize emissions by reducing or ceasing operation of the equipment or facility, unless doing so could result in physical damage to the equipment or facility, or cause injury to employees. In no case may the permittee operate more than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4).
  - d. In the event of any excess emissions which are of a nature that could endanger public health and occur during non-business hours, weekends or holidays, the permittee must immediately notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
  - e. If startups, shutdowns or scheduled maintenance may result in excess emissions, the permittee must submit startup, shutdown or scheduled maintenance procedures used to minimize excess emissions to DEQ for prior authorization, as required in OAR 340-214-0310 and 340-214-0320. New or modified procedures must be received by DEQ in writing at least 72 hours prior to the first occurrence of the

- excess emission event. The permittee must abide by the approved procedures and have a copy available at all times.
- f. Once DEQ approves startup/shutdown procedures, the permittee must notify DEQ of planned startup/shutdown or scheduled maintenance events only if required by permit condition or if it results in excess emissions. When notice is required by this condition, it must be made in accordance with Condition 54.a.
  - g. The permittee must continue to maintain a log of all excess emissions in accordance with OAR 340-214-0340(3). However, the permittee is not required to submit the detailed log with the semi-annual and annual monitoring reports. The permittee is only required to submit a brief summary listing the date, time and the affected emissions units for each excess emission that occurred during the reporting period. [OAR 340-218-0050(3)(c)]
  - h. Notwithstanding Condition 54.a, the permittee must make any reports of excess emissions due to upsets, breakdowns, startups and shutdowns by 9:00 a.m. on the first business day following the date on which the excess emissions occurred. Business days are Monday through Friday, excluding holidays observed by DEQ. [OAR 340-214-0330(1)(a)]
55. Permit Deviations Reporting: The permittee must promptly report deviations from permit requirements that do not cause excess emissions, including those attributable to upset conditions, as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. "Prompt" means within 15 days of the deviation. Deviations that cause excess emissions, as specified in OAR 340-214-0300 through 340-214-0360 must be reported in accordance with Condition 54. [OAR 340-218-0050(3)(c)(B)]
56. All required reports must be certified by a responsible official consistent with OAR 340-218-0040(5). [OAR 340-218-0050(3)(c)(D)]
57. Reporting requirements must commence on the date of permit issuance unless otherwise specified in the permit. [OAR 340-218-0050(3)(c)(E)]

Addresses of regulatory agencies are the following, unless otherwise instructed:

Submit all Notices and applications that do not include payment to DEQ's Eastern Region Permit Coordinator.

Submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Eastern Region Permit Coordinator. If you know the name of the Air Quality staff member responsible for your permit, please include it.

DEQ Eastern Region, Bend Office  
475 NE Bellevue Dr., Suite 110  
Bend, OR 97701  
541-633-2021

Submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

DEQ – Air Quality Division  
700 NE Multnomah St., Suite 600  
Portland, OR 97232  
503-229-5359

Submit all reports for EPA requirements to:

US Environmental Protection Agency  
Enforcement and Compliance Assurance Division  
Region 10 (20-C04)  
1200 Sixth Avenue, Suite 155  
Seattle, WA 98101

### Semi-annual and Annual Reports

58. The permittee must submit two (2) paper copies and one (1) electronic copy of reports of any required monitoring at least every 6 months, completed on forms approved by DEQ. Six-month periods are January 1 to June 30, and July 1 to December 31. If the report due date falls on a weekend or Monday holiday, the permittee must submit their report on the next business day. One paper copy of the report must be submitted to the EPA and two copies (one paper copy and one electronic copy) to the DEQ regional office. All instances of deviations from permit requirements must be clearly identified in such reports: [OAR 340-218-0050(3)(c)(A) and 340-218-0080(6)(d)]

- a. The semi-annual report is due on **August 15** and must include the semi-annual compliance certification, OAR 340-218-0080.
- b. The annual report is due on **March 1** and must consist of the following:
  - i. The emission fee report; [OAR 340-220-0100]
  - ii. A summary of the excess emissions log; [OAR 340-214-0340]
  - iii. The second semi-annual compliance certification for the period of July 1 through December 31; [OAR 340-218-0080]
  - iv. The report required by Condition 23 for the years that a boiler tune-up is conducted; [40 CFR 63.11225(b)(1) and (2)]



- v. Rolling 12-month annual emissions for each month calculated according to Condition 42; [OAR 340-222-0080(5)] and
  - vi. A summary of any nuisance complaints not resolved within 10 days of receiving the complaint; [OAR 340-218-0050(3)(a)]
59. The semi-annual compliance certification must include the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable): [OAR 340-218-0080(6)(c)]
- a. The identification of each term or condition of the permit that is the basis of the certification;
  - b. The identification of the method(s) or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means must include, at a minimum, the methods and means required under OAR 340-218-0050(3). *Note: Certification of compliance with the monitoring conditions in the permit is sufficient to meet this requirement, except when the permittee must certify compliance with new applicable requirements that are incorporated by reference into the permit. When certifying compliance with new applicable requirements that are not yet in the permit, the permittee must provide the information required by this condition.* If necessary, the permittee must identify any other material information that must be included in the certification to comply with section 113(c)(2) of the FCAA, which prohibits knowingly making a false certification or omitting material information;
  - c. The status of compliance with terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification must be based on the method or means designated in Condition 59.b of this rule. The certification must identify each deviation and take it into account in the compliance certification. The certification must also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance, as defined under OAR 340-200-0020 and 40 CFR Part 64, occurred; and
  - d. Such other facts as DEQ may require to determine the compliance status of the source.
60. ~~Greenhouse Gas Registration and Reporting: If the calendar year emission rate of greenhouse gases (CO<sub>2</sub>e) is greater than or equal to 2,756 tons (2,500 metric tons), the permittee must register and report its greenhouse gas emissions with DEQ in accordance with OAR 340-215. The greenhouse gas report must be certified by the responsible official consistent with OAR 340-218-0040(5).~~
61. Notwithstanding any other provision contained in any applicable requirement, the permittee may use monitoring as required under OAR 340-218-0050(3) and incorporated into the permit, in addition to any specified compliance methods, for the purpose of submitting compliance certifications. [OAR 340-218-0080(6)(e)]

**NON-APPLICABLE REQUIREMENTS**

62. The following state and federal air quality requirements are not applicable to this facility for the reasons stated. [OAR 340-218-0110]

Rule Citation	Summary	Reason for Not Being Applicable
40 CFR Part 60, Subparts Db and De	Boiler NSPS	Boilers B-1 and B-2 were manufactured prior to the applicability of the standards.
40 CFR Part 63, Subpart DDDDD	Boiler MACT	This permit includes synthetic minor limits for HAPs. Therefore, the source is not subject to the boiler MACT for major sources of HAPs.

**GENERAL CONDITIONS****G1. General Provision**

Terms not otherwise defined in this permit have the meaning assigned to such terms in the referenced regulation.

**G2. Reference materials**

Where referenced in this permit, the versions of the following materials are effective as of the dates noted unless otherwise specified in this permit:

- a. Source Sampling Manual; November 15, 2018.
- b. Continuous Monitoring Manual; April 16, 2015 – State Implementation Plan Volume 3, Appendix A6; and
- c. All state and federal regulations as in effect on the date of issuance of this permit.

**G3. Applicable Requirements**

Oregon Title V Operating Permits do not replace requirements in Air Contaminant Discharge Permits (ACDP) issued to the source even if the ACDP(s) have expired. For a source operating under a Title V permit, requirements established in an earlier ACDP remain in effect notwithstanding expiration of the ACDP or Title V permit, unless a provision expires by its terms or unless a provision is modified or terminated following the procedures used to establish the requirement initially. Source specific requirements, including, but not limited to TACT, RACT, BACT, and LAER requirements, established in an ACDP must be incorporated into the Oregon Title V Operating Permit and any revisions to those requirements must follow the procedures used to establish the requirement initially.



~~G4. Compliance [OAR 340-218-0040(3)(n)(C), 340-218-0050(6), and 340-218-0080(4)]~~

- ~~a. The permittee must comply with all conditions of this permit. Any permit condition noncompliance constitutes a violation of the Federal Clean Air Act and/or state rules and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application. Any noncompliance with a permit condition specifically designated as enforceable only by the state constitutes a violation of state rules only and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.~~
- ~~b. Any schedule of compliance for applicable requirements with which the source is not in compliance at the time of permit issuance is supplemental to, and does not sanction noncompliance with the applicable requirements on which it is based.~~
- ~~c. For applicable requirements that will become effective during the permit term, the source must meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement.~~

~~G5. Masking Emissions~~

~~The permittee must not install or use any device or other means designed to mask the emission of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement. [OAR 340-208-0400] This condition is enforceable only by the state.~~

~~G6. Credible Evidence~~

~~Notwithstanding any other provisions contained in any applicable requirement, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any such applicable requirements. [OAR 340-214-0120]~~

~~G7. Certification [OAR 340-214-0110, 340-218-0040(5), 340-218-0050(3)(c)(D), and 340-218-0080(2)]~~

~~Any document submitted to DEQ or EPA pursuant to this permit must contain certification by a responsible official of truth, accuracy and completeness. All certifications must state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and, complete. The permittee must promptly, upon discovery, report to DEQ a material error or omission in these records, reports, plans, or other documents.~~

~~G8. Open Burning [OAR Chapter 340, Division 264]~~

~~The permittee is prohibited from conducting open burning, except as may be allowed by OAR 340-264-0020 through 340-264-0200.~~

~~G9. Asbestos [40 CFR Part 61, Subpart M (federally enforceable), OAR Chapter 340-248-0005 through 340-248-0180 (state-only enforceable) and 340-248-0205 through 340-248-0280]~~

~~The permittee must comply with OAR Chapter 340, Division 248, and 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.~~

~~G10. Stratospheric Ozone and Climate Protection [40 CFR 82 Subpart F, OAR 340-260-0040]~~

~~The permittee must comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Recycling and Emissions Reduction.~~

~~G11. Permit Shield [OAR 340-218-0110]~~

- ~~a. Compliance with the conditions of the permit is deemed compliance with any applicable requirements as of the date of permit issuance provided that:
  - ~~i. Such applicable requirements are included and are specifically identified in the permit, or~~
  - ~~ii. DEQ, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.~~~~
- ~~b. Nothing in this rule or in any federal operating permit alters or affects the following:
  - ~~i. The provisions of ORS 468.115 (enforcement in cases of emergency) and ORS 468.035 (function of DEQ);~~
  - ~~ii. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;~~
  - ~~iii. The applicable requirements of the national acid rain program, consistent with section 408(a) of the FCAA; or~~
  - ~~iv. The ability of DEQ to obtain information from a source pursuant to ORS 468.095 (investigatory authority, entry on premises, status of records).~~~~
- ~~c. Sources are not shielded from applicable requirements that are enacted during the permit term, unless such applicable requirements are incorporated into the permit by administrative amendment, as provided in OAR 340-218-0150(1)(h), significant permit modification, or reopening for cause by DEQ.~~



~~G12. Inspection and Entry [OAR 340-218-0080(3)]~~

~~Upon presentation of credentials and other documents as may be required by law, the permittee must allow DEQ, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), to perform the following:~~

- ~~a. Enter upon the permittee's premises where an Oregon Title V Operating Permit program source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;~~
- ~~b. Have access to and copy, at reasonable times, any records that must be kept under conditions of the permit;~~
- ~~c. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and~~
- ~~d. As authorized by the FCAA or state rules, sample or monitor, at reasonable times, substances or parameters, for the purposes of assuring compliance with the permit or applicable requirements.~~

~~G13. Fee Payment [OAR 340-220-0010, and 340-220-0030 through 340-220-0190]~~

~~The permittee must pay an annual base fee and an annual emission fee for particulates, sulfur dioxide, nitrogen oxides, and volatile organic compounds. The permittee must submit payment to the Department of Environmental Quality, Financial Services, 700 NE Multnomah Street, Suite #600, Portland, OR 97232, within 30 days of date DEQ mails the fee invoice or August 1 of the year following the calendar year for which emission fees are paid, whichever is later. Disputes must be submitted in writing to DEQ. Payment must be made regardless of the dispute. User-based fees will be charged for specific activities (e.g., computer modeling review, ambient monitoring review, etc.) requested by the permittee.~~

~~G14. Off-Permit Changes to the Source [OAR 340-218-0140(2)]~~

- ~~a. The permittee must monitor for, and record, any off-permit change to the source that:
  - ~~i. Is not addressed or prohibited by the permit;~~
  - ~~ii. Is not a Title I modification;~~
  - ~~iii. Is not subject to any requirements under Title IV of the FCAA;~~
  - ~~iv. Meets all applicable requirements;~~
  - ~~v. Does not violate any existing permit term or condition; and~~
  - ~~vi. May result in emissions of regulated air pollutants subject to an applicable requirement but not otherwise regulated under this permit or may result in insignificant changes as defined in OAR 340-200-0020.~~~~
- ~~b. A contemporaneous notification, if required under OAR 340-218-0140(2)(b), must be submitted to DEQ and the EPA.~~

- e. ~~The permittee must keep a record describing off-permit changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.~~
- d. ~~The permit shield of Condition G11 does not extend to off-permit changes.~~

~~G15. Section 502(b)(10) Changes to the Source [OAR 340-218-0140(3)]~~

- a. ~~The permittee must monitor for, and record, any section 502(b)(10) change to the source, which is defined as a change that would contravene an express permit term but would not:~~
  - i. ~~Violate an applicable requirement;~~
  - ii. ~~Contravene a federally enforceable permit term or condition that is a monitoring, recordkeeping, reporting, or compliance certification requirement; or~~
  - iii. ~~Be a Title I modification.~~
- b. ~~A minimum 7-day advance notification must be submitted to DEQ and the EPA in accordance with OAR 340-218-0140(3)(b).~~
- c. ~~The permit shield of Condition G11 does not extend to section 502(b)(10) changes.~~

~~G16. Administrative Amendment [OAR 340-218-0150]~~

~~Administrative amendments to this permit must be requested and granted in accordance with OAR 340-218-0150. The permittee must promptly submit an application for the following types of administrative amendments upon becoming aware of the need for one, but no later than 60 days of such event:~~

- a. ~~Legal change of the registered name of the company with the Corporations Division of the State of Oregon, or~~
- b. ~~Sale or exchange of the activity or facility.~~

~~G17. Minor Permit Modification [OAR 340-218-0170]~~

~~The permittee must submit an application for a minor permit modification in accordance with OAR 340-218-0170.~~

~~G18. Significant Permit Modification [OAR 340-218-0180]~~

~~The permittee must submit an application for a significant permit modification in accordance with OAR 340-218-0180.~~

~~G19. Staying Permit Conditions [OAR 340-218-0050(6)(e)]~~

Notwithstanding Conditions G16 and G17, the filing of a request by the permittee for a permit modification, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

~~G20. Construction/Operation Modification [OAR 340-218-0190]~~

~~The permittee must obtain approval from DEQ prior to construction or modification of any stationary source or air pollution control equipment in accordance with OAR 340-210-0205 through OAR 340-210-0250.~~

~~G21. New Source Review Modification [OAR 340-224-0010]~~

~~The permittee may not begin construction of a major source or a major modification of any stationary source without having received an Air Contaminant Discharge Permit (ACDP) from DEQ and having satisfied the requirements of OAR 340, Division 224.~~

~~G22. Need to Halt or Reduce Activity Not a Defense [OAR 340-218-0050(6)(b)]~~

~~The need to halt or reduce activity will not be a defense. It will not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.~~

~~G23. Duty to Provide Information [OAR 340-218-0050(6)(c) and OAR 340-214-0110]~~

~~The permittee must furnish to DEQ, within a reasonable time, any information that DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee must also furnish to DEQ copies of records required to be retained by the permit or, for information claimed to be confidential, the permittee may furnish such records to DEQ along with a claim of confidentiality.~~

~~G24. Reopening for Cause [OAR 340-218-0050(6)(c) and 340-218-0200]~~

- ~~a. The permit may be modified, revoked, reopened and reissued, or terminated for cause as determined by DEQ.~~
- ~~b. A permit must be reopened and revised under any of the circumstances listed in OAR 340-218-0200(1)(a).~~
- ~~c. Proceedings to reopen and reissue a permit must follow the same procedures as apply to initial permit issuance and affect only those parts of the permit for which cause to reopen exists.~~



~~G25. Severability Clause [OAR 340-218-0050(5)]~~

~~Upon any administrative or judicial challenge, all the emission limits, specific and general conditions, monitoring, recordkeeping, and reporting requirements of this permit, except those being challenged, remain valid and must be complied with.~~

~~G26. Permit Renewal and Expiration [OAR 340-218-0040(1)(a)(D) and 340-218-0130]~~

- ~~a. This permit expires at the end of its term, unless a timely and complete renewal application is submitted as described below. Permit expiration terminates the permittee's right to operate.~~
- ~~b. Applications for renewal must be submitted at least 12 months before the expiration of this permit, unless DEQ requests an earlier submittal. If more than 12 months is required to process a permit renewal application, DEQ must provide no less than six (6) months for the owner or operator to prepare an application.~~
- ~~c. Provided the permittee submits a timely and complete renewal application, this permit will remain in effect until final action has been taken on the renewal application to issue or deny the permit.~~

~~G27. Permit Transference [OAR 340-218-0150(1)(d)]~~

~~The permit is not transferable to any person except as provided in OAR 340-218-0150(1)(d).~~

~~G28. Property Rights [OAR 340-200-0020 and 340-218-0050(6)(d)]~~

~~The 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, except as provided in OAR 340-218-0110.~~

~~G29. Permit Availability [OAR 340-200-0020 and 340-218-0120(2)]~~

~~The permittee must have available at facility at all times a copy of the Oregon Title V Operating Permit and must provide a copy of the permit to DEQ or an authorized representative upon request.~~

All inquiries should be directed to:  
DEQ—Eastern Region  
475 NE Bellevue Dr., Suite 110  
Bend, OR 97701  
541-388-6146

Table 4, Part 63 National Emission Standards for Hazardous Air Pollutants for Source Categories  
Subpart A—General Provisions

General Provisions Cite from Table 8 of Subpart JJJJJJ	Subject	Does it apply?
§63.1	Applicability	Yes.
§63.2	Definitions	Yes. Additional terms defined in §63.11237.
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities and Circumvention	Yes.
§63.6(a), (b)(1)-(b)(5), (b)(7), (c), (f)(2)-(3), (g), (i), (j)	Compliance with Standards and Maintenance Requirements	Yes.
§63.8(a), (b), (c)(1), (c)(1)(ii), (c)(2) to (c)(9), (d)(1) and (d)(2), (e), (f), and (g)	Monitoring Requirements	Yes.
§63.9	Notification Requirements	Yes, excluding the information required in §63.9(h)(2)(i)(B), (D), (E) and (F). See §63.11225.
§63.10(a) and (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§63.10(b)(2)(iii)	Maintenance records	Yes.
§63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§63.12	State Authority and Delegation	Yes.
§63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9)	Reserved	No.

**ATTACHMENT 1: EMISSION FACTORS FOR HAZARDOUS AIR POLLUTANTS**

HAP	Wood-fired boilers (lb/MMb steam)	Natural-gas combustion (lb/MMscf)	Fuel-oil combustion (lb/Mgal)	Kilns-- Green Ponderosa Pine (lb/MBF)	Kilns-- Burnt Ponderosa Pine (lb/MBF)	Kilns-- Lodgepole Pine (lb/MBF)	Kilns--Douglas Fir (b/MBF)	Kilns-- White Fir (lb/MBF)
1,1,1-Trichloroethane	4.30E-05		2.36E-04					
1,2-Dichloroethane	4.10E-05							
1,2-Dichloropropane	4.60E-05							
2,3,7,8-Tetrachlorodibenzo-p- dioxins	1.20E-11							
2,4,6-Trichlorophenol	3.10E-08							
2,4-Dinitrophenol	2.50E-07							
4-Nitrophenol	1.50E-07							
Acetaldehyde	1.20E-03	2.83E-04		4.20E-02	4.47E-02	1.20E-02	5.10E-02	5.50E-02
Acetophenone	4.50E-09							
Acrolein	8.90E-05			1.70E-03	1.60E-03	1.70E-03	7.00E-04	1.50E-03
Antimony	1.10E-05		5.25E-03					
Arsenic	3.10E-05	2.00E-04	5.44E-04					
Benzene	5.90E-03	2.10E-03	2.14E-04					
Beryllium	1.50E-06	1.20E-05	4.08E-04					
Bis (2-Ethylhexyl) phthalate	6.60E-08							
Bromomethane	2.10E-05							
Cadmium	5.70E-06	1.10E-03	4.08E-04					
Carbon tetrachloride	6.30E-05							
Chlorine	1.10E-03							
Chlorobenzene	4.60E-05							
Chloroform	3.90E-05							
Chloromethane	3.20E-05							
Chromium (total)	2.90E-05	1.40E-03	4.08E-04					
Cobalt	9.10E-06	8.40E-05	6.02E-03					
Dibenzofurans	2.60E-09							
Dichlorobenzene		1.20E-03						



HAP	Wood-fired boilers (lb/MMb steam)	Natural gas combustion (lb/MMscf)	Fuel oil combustion (lb/Mgal)	Kilns- Green Ponderosa Pine (lb/MBF)	Kilns- Burnt Ponderosa Pine (lb/MBF)	Kilns- Ledgepole Pine (lb/MBF)	Kilns-Douglas Fir (lb/MBF)	Kilns- White-Fir (lb/MBF)
Dichloromethane	4.10E-04							
Ethylbenzene	4.30E-05		6.36E-05					
Formaldehyde	7.80E-04	7.50E-02	6.10E-02	2.80E-03	4.00E-03	4.00E-03	1.30E-03	2.80E-03
Hexane		1.8						
Hydrogen chloride	1.12E-03		3.47E-01					
Hydrogen fluoride			3.73E-02					
Lead	6.70E-05		1.22E-03					
Manganese	9.30E-03	3.80E-04	8.16E-04					
Mercury	4.90E-06	2.60E-04	4.08E-04					
Methanol				5.50E-02	1.64E-01	7.30E-02	3.89E-02	1.22E-01
Methyl Isobutyl Ketone								
Naphthalene	1.40E-04	6.10E-04	1.13E-03					
Nickel	4.60E-05	2.10E-03	4.08E-04					
Pentachlorophenol	7.10E-08							
Phenol	7.10E-05							
Phosphorus	3.80E-05		9.46E-03					
Polychlorinated biphenyls	1.10E-08							
Total POMs	1.70E-04	8.82E-05	3.30E-03					
Propionaldehyde	8.50E-05			1.90E-03	1.00E-03	1.90E-03	5.00E-04	1.20E-03
Selenium	3.90E-06	2.40E-05	2.04E-03					
Styrene	2.70E-03							
Tetrachloroethylene	5.30E-05							
Toluene	1.30E-03	3.40E-03	6.20E-03					
Trichloroethylene	4.20E-05							
Vinyl chloride	2.50E-05							
Xylenes	3.50E-05		1.09E-04					

The drying kiln HAP emission factors are based on the 2015 *Compilation of VOC and HAP Emission Factors for Lumber Drying Kilns* - ODEQ and EPA R10, DEQ 2013 factors, for drying kilns operating below 200 degrees Fahrenheit.