Yakama Forest Products
White Swan, WA

40 CFR Part 71 Operating Permit
No. R10T5120000

Renewal Application

May 2025
Version 0

Prepared by

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Abbreviations

ASTM	American Society for Testing and Materials
DC	dry chips
CFR	Code of Federal Regulations
CO	carbon monoxide
EPA	Environmental Protection Agency
FARR	Federal Air Rules for Reservations
GC	green chips
HAP	hazardous air pollutant as defined in 1990 Clean Air Act
HF	hog fuel
LLM	large log mill
LPG	Liquified Petroleum Gas (Propane)
MACT	Maximum Achievable Control Technology
MMBtu	one million British Thermal Units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOx	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM10	PM less than 10 micron
PM25	PM less than 2.5 micron
ppmw	parts per million by weight
ppmv	parts per million by volume
PTE	Potential to Emit as defined in 1990 Clean Air Act
SD	saw dust
SH	shavings
SLM	small log mill
SOx	sulfur oxides
VOC	volatile organic compounds
YFP	Yakama Forest Products

1. Introduction

Identifying information and description of the source's processes as required under Part 71 is provided in Attachment 1 on EPA forms GIS, EUD-1, EUD-3, EMISS PTE, IE, and ICOMP. The information below supplements the information provided on the forms.

Yakama Forest Products (YFP) is a tribal enterprise wholly owned by the Confederated Tribes and Bands of the Yakama Nation. It operates two sawmills in White Swan, Washington where it produces common boards, industrial shop lumber, and dimensional lumber from timber harvested from mostly tribal lands. The two mills are separated by a public road. The Small Log Mill (SLM) is located on the east side of the road and the Large Log Mill (LLM) is located on the west side of the road. EPA has determined that YFP must treat the two mills as a single source for regulatory applicability purposes.

The primary air emission sources are two boilers that support dry kiln operations, the kilns, and the mill cutting/planing activities. All the boilers are fueled exclusively using liquified petroleum gas (LPG, or commonly "propane") in conformance with the ASTM D 1835 HD 5 specification.

The kilns produce VOCs and air toxics that are released from the wood during drying operations.

The emissions from the mechanical aspects of the mill (sawing and planing) are limited to particulate, VOC and methanol emissions.

Figure 1.1 shows the layout of both mills. Figures 1.2 and 1.3 show the emissions sources for the Small Log Mill and the Large Log Mill respectively.

Figures 1.4 and 1.5 present process schematics for the Small and Large Log Mills respectively.

Section 7 of this renewal application narrative lists the requested specific revisions to the existing permit.

Figure 1.1 – Location and Layout of Large and Small Log Mills.

Figure 1.2 – Small Log Mill Emission Source Locations

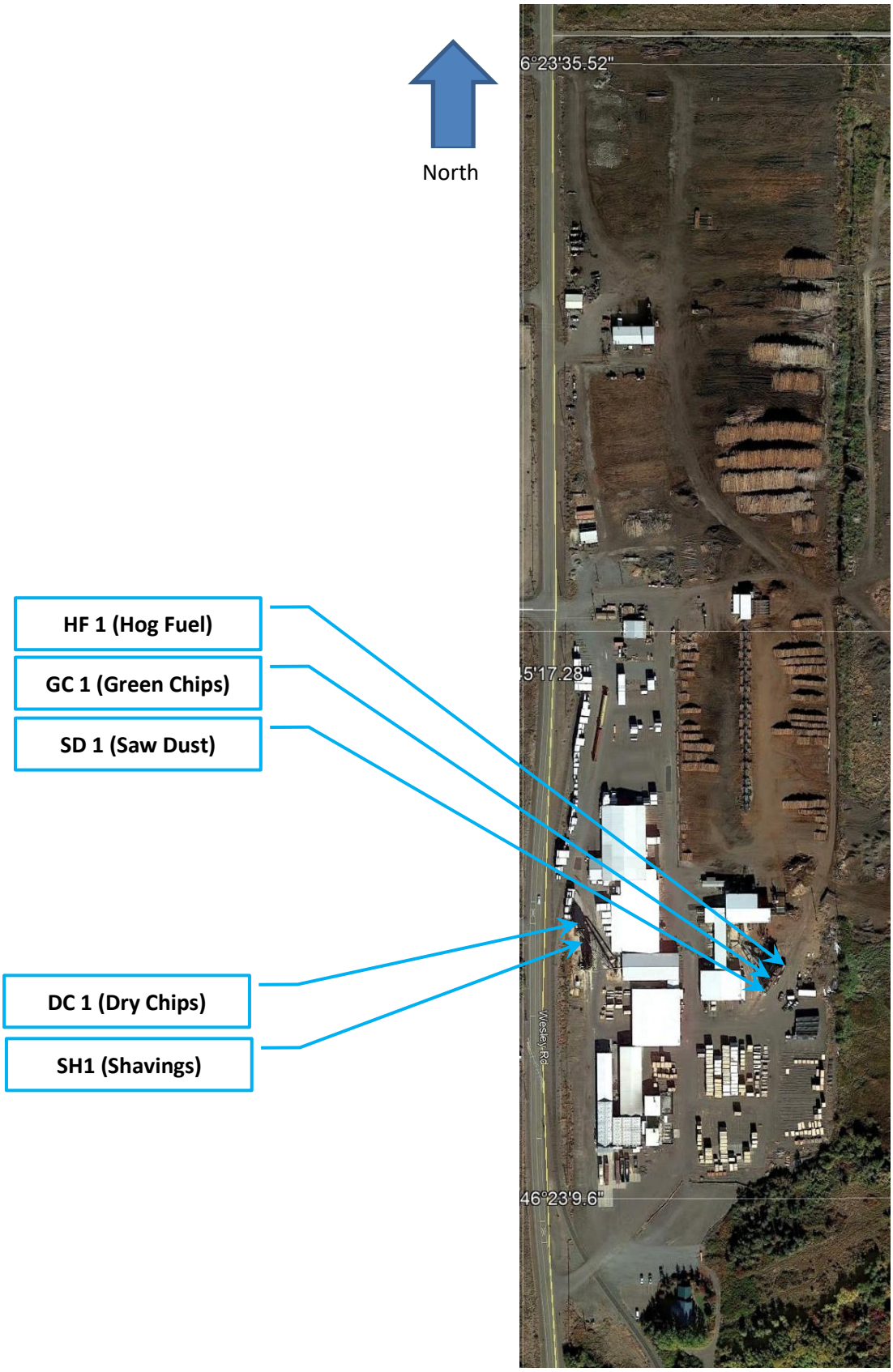


Figure 1.3 – Large Log Mill Emission Source Locations

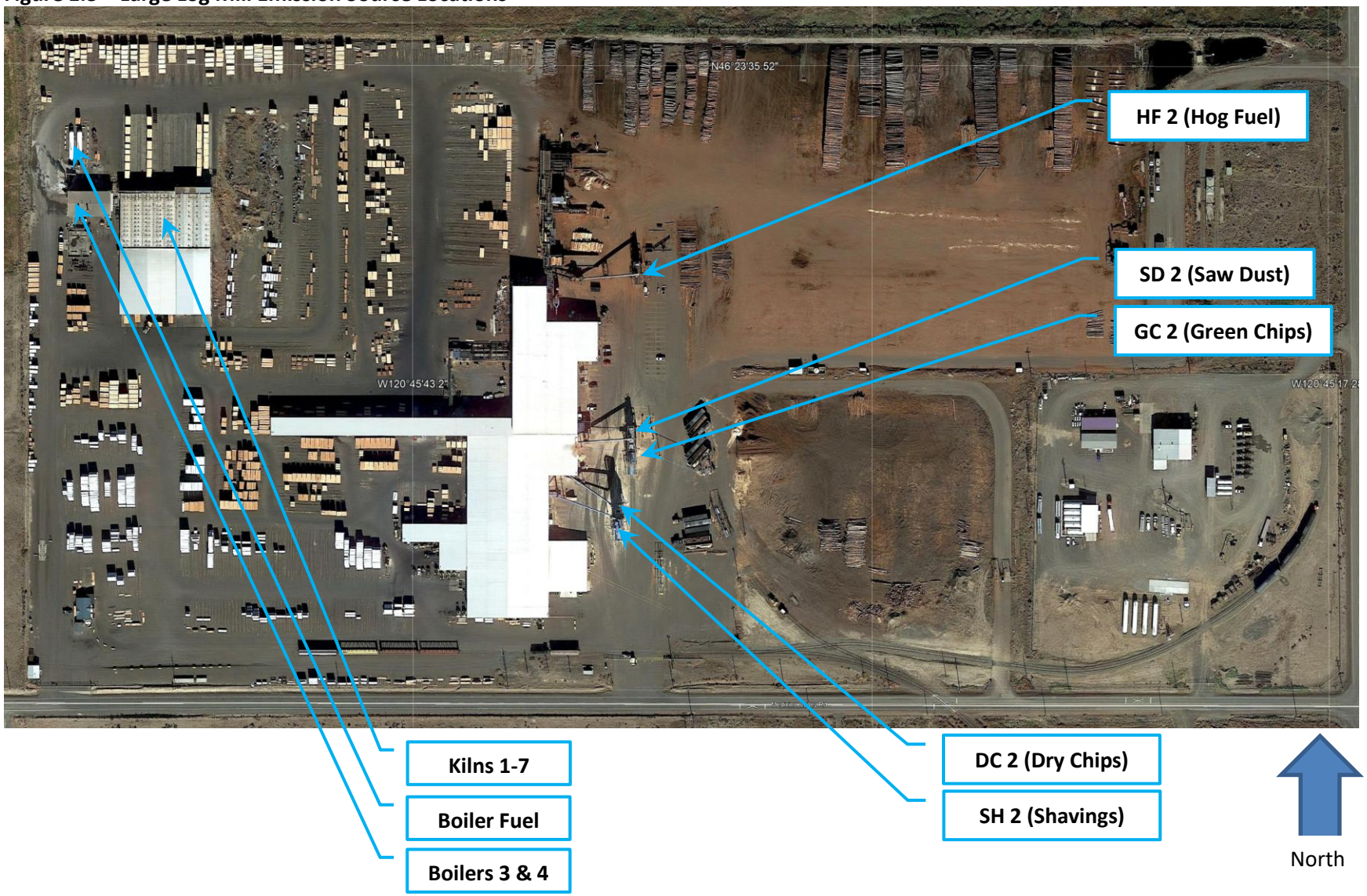
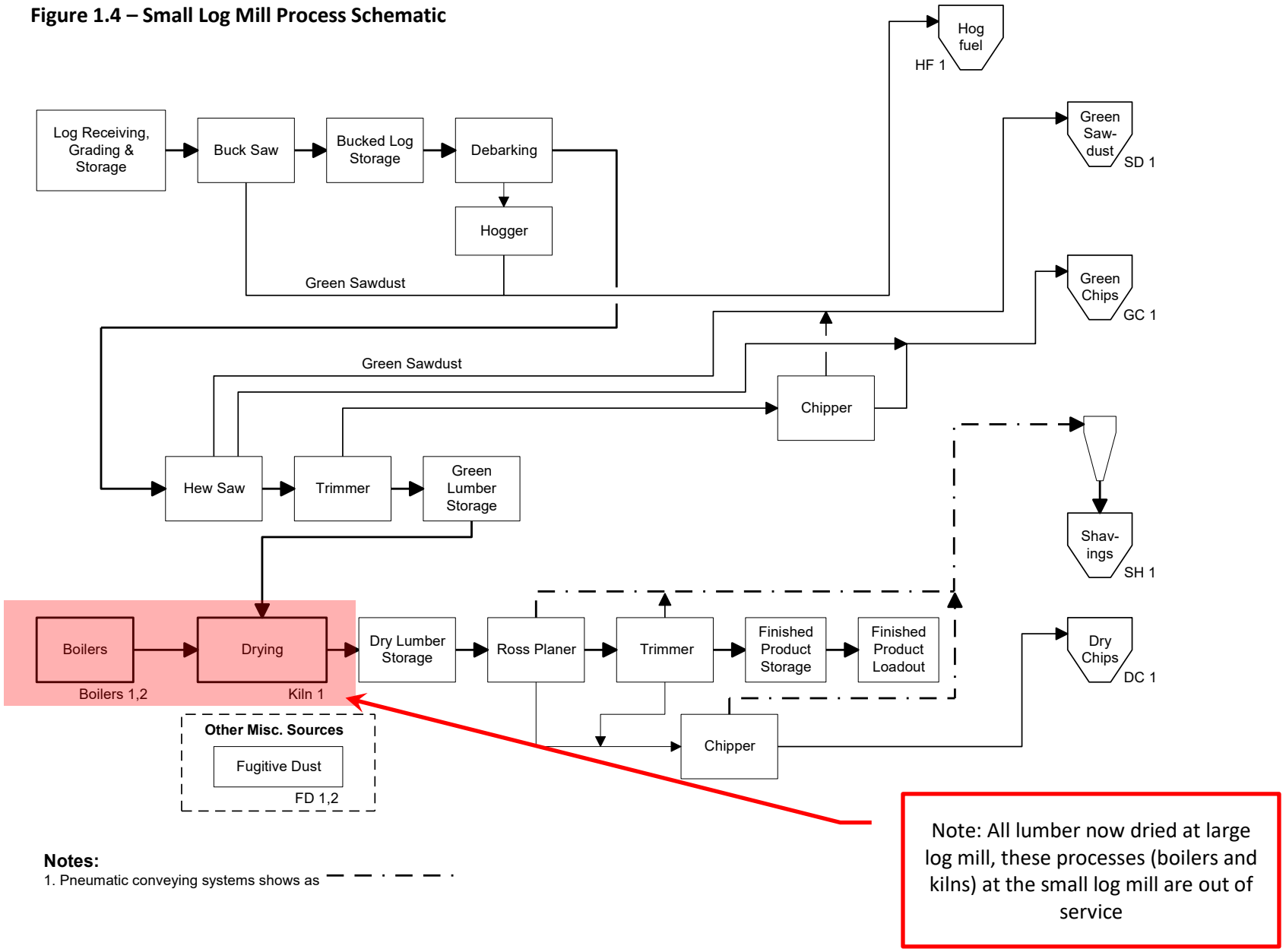


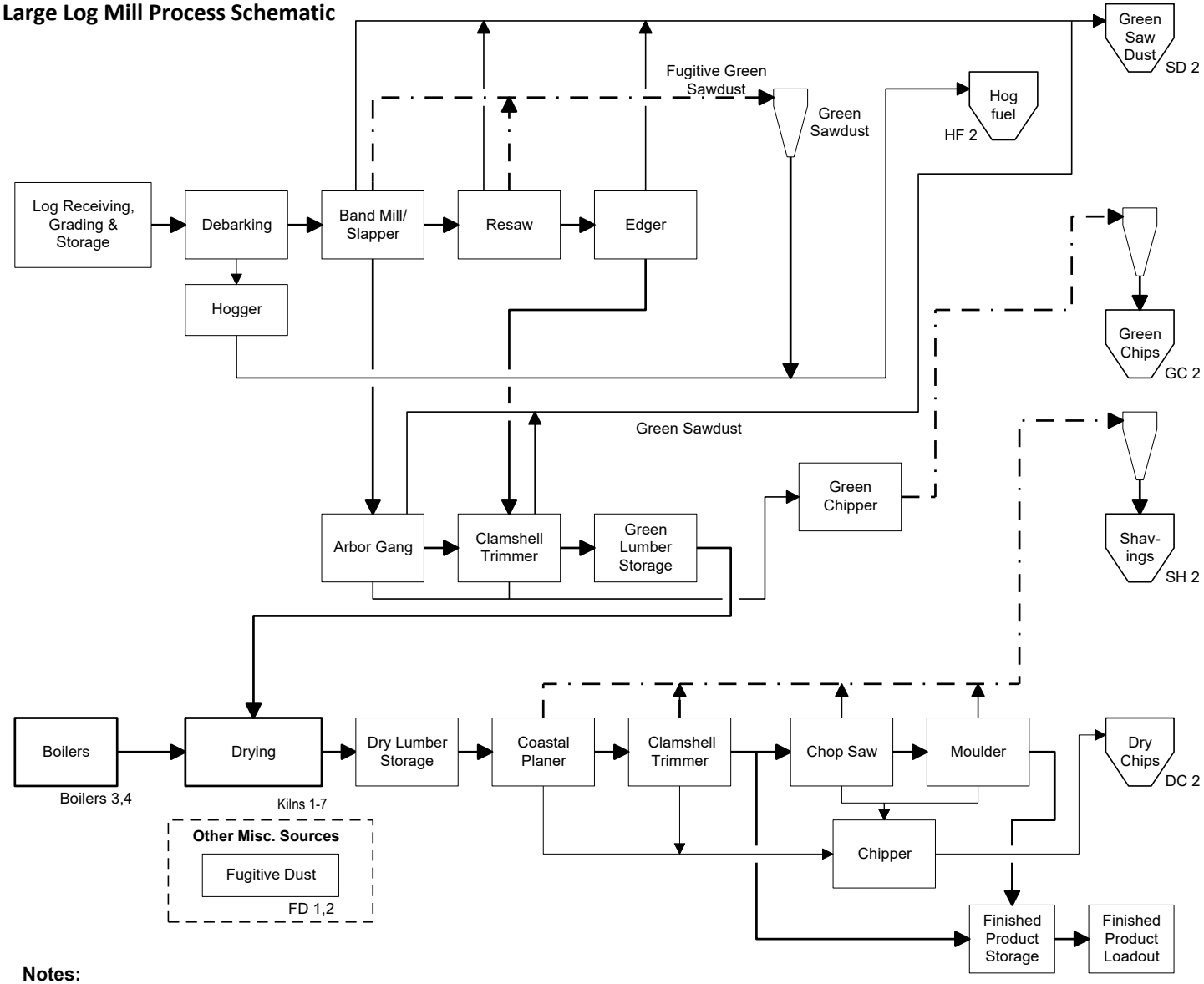
Figure 1.4 – Small Log Mill Process Schematic



Notes:

1. Pneumatic conveying systems shows as

Figure 1.5 – Large Log Mill Process Schematic



Notes:

1. Pneumatic conveying systems shows as

2. Applicable Regulatory Requirements

Applicable Requirements

The list below is a summary of "applicable requirements," as defined in 40 CFR 71.2, for YFP. Descriptions of specific applicable requirements are provided on EPA I-COMP forms in Attachment 1.

FARR (40 CFR Part 49)

Certain requirements in the Federal Air Rules for Reservations (FARR) in 40 CFR Part 49, Subpart C apply to Yakama Forest Products.

Among the main limits, FARR requires that the LPG fuel combusted be less than 400 ppmw sulfur and that the particulate concentration from the boilers, and all other particulate sources, not exceed 0.1 grain per dry standard cubic foot. All sources must have opacity of less than 20%. As noted in the introduction, the boilers are fueled exclusively with LPG meeting the ASTM HD 5 specification. The ASTM D 1835 HD 5 LPG fuel specification is a maximum of 123 ppmw (0.0123%) total sulfur.

In addition, there is a sulfur dioxide concentration standard of 500 ppmv. The use of LPG as boiler fuel provides for operating conditions far below (fuel is 123 ppmw and stack gas is estimated at 5 ppmv) these limits.

Under the FARR, Yakama Forest Products must file annual registration forms and complete a fugitive particulate emissions matter survey.

Boiler NSPS (40 CFR Part 60 Subpart Dc)

The boilers are subject to the fuel quality requirements of 40 CFR Part 60 Subpart Dc. The fuel must have a sulfur concentration of less than 0.5%. The ASTM D 1835 HD 5 specification requires a maximum of 123 ppmw (0.0123%) total sulfur.

Plywood and Composite Wood Products MACT (40 CFR Part 63 Subpart DDDD)

The subpart imposes no substantive requirements for sawmills – it requires only submission of an initial notification under 40 CFR 63.9(b)(2). YFP submitted its initial notification in December 2009. If in the future YFP demonstrates lower HAP PTE based on testing or more realistic, acceptable sawmill emission factors, or if EPA changes its "once in, always in" policy, YFP would expect to seek to revise the applicability status for Subpart DDDD.

Boiler NESHAP (40 CFR Part 63 Subpart DDDDD)

The Boiler NESHAP requires a one-time energy assessment and periodic boiler tune-ups. The energy assessment has been completed. Annual tune-ups are not required because the boiler combustion is controlled by an oxygen sensor. 40 CFR 63.7540(12) allows the tune-up frequency to be extended to five year intervals if an oxygen trim system is used to control the boiler burner.

Federal Operating Permit Program – 40 CFR Part 71

YFP is subject to Part 71 because EPA considers it to be a major source for HAP emissions, and because it has the potential to emit over 100 tons per year of a criteria pollutant. Table 2.1 presents actual 2019 emissions and Table 2.2 the current potential to emit (PTE).

Table 2.1 – Calendar Year 2024 Actual Emissions.

	Pollutants (tpy)								
Emissions Source	**SOx**	**NOx**	**CO**	**VOC**	**TP**	**PM10**	**PM25**	**HAP**	**Data Source**
Actual Emissions									
Boiler	**0.6**	**12.4**	**7.2**	**1.0**	**0.7**	**0.7**	**0.7**	**0.0**	**All emission factors from Title V Permit**
Kiln				**31.7**	**0.8**	**0.8**		**1.4**	**unless otherwise noted on detail**
Mill				**5.7**	**6.8**	**5.8**	**3.4**	**0.22**	**worksheets.**
Misc. Non-fugitive Activities					**1.6**	**0.8**	**0.40**		
Misc. Fugitive Activities					1.7	0.8	0.42		
Fugitive Dust					13.8	13.8			
Total	**0.62**	**12.4**	**7.2**	**38.4**	**25.4**	**22.7**	**4.9**	**1.6**	
Total Point Source	**0.62**	**12.4**	**7.2**	**38.4**	**9.9**	**8.0**	**4.5**	**1.6**	

Notes:
1. Boldface values are point sources.

Table 2.2 –Current Potential to Emit.

	Pollutants (tpy)									
Emissions Source	**SOx**	**NOx**	**CO**	**VOC**	**TP**	**PM10**	**PM25**	**HAP**	**Methanol**	**Data Source/Comments**
Total Site Potential to emit in tons per calender year										
Boiler	**2.0**	**41.1**	**23.7**	**3.2**	**2.2**	**2.2**	**2.2**	**0.0**		**AP-42 Section 1.5 (HD-5 LPG)**
Kiln				**170.5**	**7.8**	**7.8**		**17.4**	**10.8**	**Western White Pine (<200 oF) VOC**
Mill				**16.37**	**19.1**	**16.2**	**9.50**	**0.61**	**0.61**	
Misc. Non-fugitive Activities					**26.1**	**13.1**	**6.53**			
Total Point Source	**2.0**	**41.1**	**23.7**	**190.1**	**55.2**	**39.2**	**18.2**	**18.0**	**11.4**	

Non-Applicable Requirements

Regulations not listed on I-COMP forms are considered to be not currently applicable, but several non-applicable requirements are discussed specifically below to detail the basis for current non-applicability.

Chemical Accident Prevention Program (40 CFR Part 68)

The Chemical Accident Prevention Program requirements apply to an owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process. YFP has reviewed the lists of regulated substances and corresponding threshold quantities in 40 CFR Part 68 and has confirmed that it does not have or use at any time amounts of any listed substance over the listed threshold quantities. The only listed substance YFP uses in quantity is acetylene. YFP keeps no more than 7,000 to 8,000 pounds of acetylene in Standard Bottles spread out over the site – well below the 10,000 pound applicability threshold for acetylene.

Compliance Assurance Monitoring (40 CFR 64.2)

CAM requirements apply to units that are subject to an emission limitation, use a control device to achieve compliance with the emission limitation, and have potential pre-control emissions over a certain amount. None of the emission units at YFP use a control device to achieve compliance with applicable emission limits. CAM requirements, therefore, do not apply.

Tank NSPS (40 CFR Part 60 Subpart Kb)
Table 2.3 provides a summary of the fuel storage tanks on site with a nominal capacity of 10,000 gallon (38 m3) or more. Based on the information on Table 2.3, Subpart Kb is not applicable for these tanks, as they are either:

- smaller than $75m^{3,}$
- are between 75 and $151m^3$ in size and have a vapor pressure less than 15 kPa, or
- are pressure vessels designed for more than 204.9 kPa.

Table 2.3 – Summary of Fuel Tanks $38m^3$ or Larger

		Tank					
	Nominal Capacity	Length/ Height	Dia.	Volume		Vapor Pressure	
Tank Name	(gallons)	(ft)	(ft)	(ft3)	(m3)	(kPa)	Comments
Small Log Mill							
Diesel 1	12,000	32.08	8	1,613	45.7	0.15	
Large Log Mill							
Boiler Fuel 3 (LPG)	30,000	55	10	4,320	122.3	> 100	Pressure Vessel
Boiler Fuel 4 (LPG)	30,000	55	10	4,320	122.3	> 100	Pressure Vessel
Diesel 2	10,000	20.67	10	1,623	46.0	0.15	

3. Insignificant Sources

Each sawmill has a small pneumatic conveying system that discharges saw filings into a 55 gallon drum. These are considered insignificant sources due to the low air flow rate and the high density (metal filings) particulate. These systems have no visible emissions.

The are no stationary emergency equipment on site that generate air emissions.

Table 3.1 lists and inventory of all fuel storage tanks on site except boiler fuel storage. Boiler fuel storage tank data is provided in Table 2.2. All of these are considered insignificant sources (less than 2 tpy RAP and less than 1,000 pounds per year HAP).

Table 3.1 – Inventory of All Fuel Tanks on Site (Except boiler fuel storage).

Tank Name	Nominal Capacity (gallons)
Small Log Mill	
Truck diesel	12,000
Log yard diesel	5,000
Fork lift diesel	1,000
Gas	500
Kerosene	200
Heating Oil	1,000
Large Log Mill	
Log yard diesel	10,000
Log yard diesel	6,000

4. Emissions Calculations

This section describes the methodology used to calculate emissions from each source. Site wide emissions are provided in EPA for EMISS in Attachment 1. Detailed emissions spreadsheets are in Attachment 2 of this application. They are presented in the same form as they would be for the annual fee calculation requirement.

Boilers

The boiler emissions calculations are based on the amount of fuel that each boiler uses per year. The boilers are fueled exclusively with liquified petroleum gas (LPG) meeting the ASTM D 1835 Special Duty (HD 5) specification. Fuel is only metered as a total, not which boiler is goes to, so the boilers at each mill are assumed to use a prorated amount of fuel based on operational hours. The sulfur emissions are based on the HD 5 specification of 123 ppmw maximum.

All emission factors used for the boilers are AP-42 for the HD 5 fuel specification. They are shown on the detail calculation sheets in Attachment 2.

Boiler potential to emit in Table 7b, Attachment 2, is based on continuous operation (8,760 hours per year) The same emission factors are used as for actual emissions.

Kilns

This application uses the kiln emission factors that were provided by USEPA Region 10. YFP is concerned about the data quality of the kiln factors, but has used them for this calculation at EPA's request. The concerns about these factors include:

1. The major emitting species at YFP (Grand Fir) was not tested, White Fir data was used.
2. The testing was at a laboratory scale.
3. The emitting compounds found are known to be very difficult to analyze due to known interferences.

The kiln potential to emit calculation is complicated because there are three wood species, pine, Grand fir, and Douglas fir, each with their own emission factor and production rate. The mill has a permit limitation to never dry pine over 200 ^{o}F. For the other species, they have never been dried at over 200 oF and it reduces the product value if they are dried over 200 ^{o}F. Therefore, the PTE calculation is based on a maximum temperature of 200 ^{o}F for all species.

The maximum production rate to calculate PTE for the kilns, and the subsequent by-product production, were calculated based on process models. The maximum production rate used for this renewal is the same as for the 2020 renewal and those detailed exhibits are not included in this renewal application.

Wood By-Product Handling and Storage

The kiln is the rate limiting step for the saw mill. The kiln is designed to operate continuously, 24/7 with the exception of a two week shutdown that normally occurs in late December. The saw mill operates between 40 and 80 hours per week to support the kiln. The length of time the sawmill operates is a function of species. Fir can be dried faster than pine, so heavy fir production requires the sawing/planning operations to operate longer than heavy pine production. There is no market for un-dried lumber and lumber must be dried very soon after the initial cutting. Therefore, all production must pass expediently through the kiln.

Each mill handles wood by-products for resale. These products are hog fuel, sawdust, green chips, dry chips, and shavings. For the actual emissions calculations, the quantities of by-products are taken from calendar year 2024 production records (bone dry tons of by-product per thousands of board feet production).

The emission factors for planing and material handling are from the current Part 71 permit. The maximum by-product production calculation used in the emissions assessment is based on the maximum mill production. The maximum capacity is not based on the material handling equipment capacity.

A portion of the sawdust and all green chips are pneumatically conveyed at the Large Log Mill from the source to the load out bins. Shavings are pneumatically conveyed at both mills. Emissions were calculated for planing, pneumatic conveying, bin loading, and truck loading.

Fugitive Dust

The fugitive dust calculations (Attachment 2) are from AP-42 and are based on the yard equipment metrics and watering patterns. They are likely a significant overestimate, but no better data has been located yet. A detailed yard study calculated emissions based on a production level of 135,988 mbf/yr. Emissions were then linearly scaled on this number based on actual or PTE production values.

5. Annual Fees

YFP has submitted annual fee forms and paid fees to EPA since 2003. For Calendar year 2024 a total of $4,724.90 was paid.

6. Compliance History

The Small Log Mill started operating in August 1998; the Large Log Mill started operating in June 2002. Since 2000, YFP and the Tribe have had periodic permitting and compliance discussions with EPA Region 10. The main areas of discussion have been requirements of NSPS Subpart Dc and Title V/Part 71 permitting.

In August 2000, EPA issued a letter to YFP regarding NSPS requirements for the Small Log Mill boiler. The issue was discussed at a September 7, 2001 meeting between YFP and EPA. In July 2003, YFP submitted to EPA a Title V permit application for the Large Log Mill and fees of $13,478. YFP has paid fees to EPA for each year since. On September 18, 2003 the agency determined that the application was incomplete. On October 6, 2003, EPA issued a notice of noncompliance to YFP, listing violations of Title V Part 71 requirements and provisions in NSPS Subpart Dc and Subpart A. YFP responded on November 26, 2003, seeking waiver of NSPS initial source test requirements, providing fuel records, providing construction/start-up dates, and proposing an alternative approach to recording amounts of fuel combusted. YFP provided a second response on January 1, 2004, addressing the Part 71 allegations and requesting alternate forms of compliance determination for certain NSPS requirements. On January 27, 2004, EPA issued a follow-up letter agreeing to meet with YFP to discuss the issues.

A meeting between YFP and EPA was held on February 6, 2004. At the meeting, a former YFP Business Manager became concerned that YFP did not have proper authority from the Tribal Council to make commitments to the federal government because there had not yet been any government-to-government consultation about EPA authority or jurisdiction on the Yakama Reservation. He therefore asked that the meeting cease until YFP could get formal authority from the Tribal Council.

On June 2, 2004, the Yakama Nation Tribal Council requested a government-to-government consultation with EPA regarding implementation of the federal Clean Air Act Title V air operating permit program. EPA Region 10 responded on July 15, 2004 offering to meet. At some point during this time, however, the Tribal Council voted to constrain YFP's ability to work with EPA on the outstanding issues. An April 8, 2005 letter from EPA to the Tribal Council Chairman asked the Council to authorize YFP to work with EPA to address the cited violations. After a meeting between EPA and representatives from YFP and the Tribe in Toppenish on May 4, 2005, EPA issued a May 31, 2005 letter outlining a plan for compliance with Title V and NSPS requirements.

In June (and an October supplement) 2006, YFP submitted an alternative monitoring request to EPA seeking approval to rely on fuel supplier certifications and other procedures to monitor compliance with the fuel sulfur content limit for the two Large Log Mill boilers, in place of NSPS Subpart Dc on-site sampling and analysis requirements. EPA responded in a March 5, 2007 letter identifying additional information YFP would provide to support the request. A September 2007 letter from EPA to YFP follows up on an EPA air inspection of the plant. The letter notes that EPA is prepared to continue to work cooperatively with YFP and the Yakama Nation to achieve compliance and seeks agreement on a compliance strategy and timeline; the letter provides a List of Compliance Issues of Concern.

In a meeting on November 13, 2007, YFP discussed with EPA derating the Large Log Mill boilers (Boilers 3 & 4) to below 30 MMBtu/hr. Oil fired boilers rated at 30 MMBtu/hr are subject to the

Subpart Dc fuel sampling and opacity monitoring requirements. YFP undertook to derate the boilers to below this threshold so that these provisions would no longer apply. In an April 10, 2008 letter to EPA, YFP stated that it was going forward with the derate. YFP purchased new burners for the boilers, then conducted testing in February 2009 to demonstrate that the boilers were derated to below 30 MMBtu/hr (the boilers were rated at 29.1 MMBtu/hr) and submitted the results to EPA. In a June 29, 2009 letter to YFP, EPA confirmed its determination that the boilers were successfully derated such that the maximum heat input capacity of each boiler is now less than 30 million Btu per hour. As noted above in the Introduction, these requirements no longer apply because YFP no longer has the capacity to fire fuel oil in the LLM boilers.

During the time that Boilers 3 & 4 were rated over 30 MMBtu/hr, however, YFP did not meet the requirements in 40 CFR 60.44c(g) & 60.46c(d)(2) to sample fuel tank oil after each new shipment was received, although it did seek approval of alternative monitoring based on fuel supplier certifications. Similarly, during the time Boilers 3 & 4 were rated over 30 MMBtu/hr, the plant did not meet the requirement in 40 CFR 60.47c(a) and 60.43c(c) to install and operate a COMS to monitor compliance with 20% opacity limit. Finally, during this time the plant also did not meet the requirement in 40 CFR 60.48c(g)(1) to record and maintain records of amounts of fuel combusted each day. As noted, these requirements no longer apply.

In addition, YFP did not meet the deadlines for the requirement in 40 CFR 60.8(a) to conduct an initial performance test within 180 days after initial startup and report the results, nor did it notify EPA of date of construction, anticipated startup and actual startup (40 CFR 60.48c(a) & 60.7) in a timely fashion. To address the initial performance test requirements, YFP provided fuel supplier certifications to EPA in a December 16, 2009 submission. The certifications show that the fuel oil initially fired in the boilers contained less than 0.5 weight percent sulfur. YFP provided Method 9 observation results to EPA in February 2009. With regard to dates of construction and startup, as of May 31, 2005, EPA confirmed that, though untimely, it had the necessary information.

As noted in Section 2.1 above, the Plywood and Composite Wood Products MACT (40 CFR Part 63 Subpart DDDD) imposes no substantive requirements for YFP, but it does require submission of an initial notification under 40 CFR 63.9(b). YFP provided the required initial notification information to EPA in December 2009, after the deadline.

In April 2009 the Tribal Government authorized YFP to seek a Title V/Part 71 air operating permit from EPA, resulting in a permit application.

The mill was issued a Title V/Part 71 permit on September 29, 2015. The mill has been in compliance since then. The 2020 permit renewal was submitted after the March 29, 2020 deadline. This permit renewal application will be submitted after the March 21, 2025 deadline.

7. Requested Permit Revisions

No permit revisions are requested.

Attachment 1
EPA Forms

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
GENERAL INFORMATION AND SUMMARY (GIS)

A. Mailing Address and Contact Information

Facility name Yakama Forest Products

Mailing address: Street or P.O. Box PO Box 489

City White Swan State WA ZIP 98952 -

Contact person: Mr. Sheldon Howell Title General Manager

Telephone (509) 874 - 2901 Ext. 101

Facsimile (509) 874 - 8884

B. Facility Location

Temporary source? ☐ Yes ☑ No Plant site location 251 Medicine Valley Road

City White Swan State Wa County Yakima EPA Region 10

Is the facility located within:

Indian lands? ☑ YES ☐ NO An offshore source in federal waters? ☐ YES ☑ NO

Non-attainment area? ☐ YES ☑ NO If yes, for what air pollutants? _____

Within 50 miles of affected State? ☑ YES ☐ NO If yes, What State(s)? _____

C. Owner

Name Yakama Indian Nation Street/P.O. Box PO Box 151

City Toppenish State WA ZIP 98948 -

Telephone (509) 865 - 5121 Ext _____

D. Operator

Name (Same as above) Street/P.O. Box _____

City _____ State _____ ZIP _____ -

Telephone (_____) _____ - _____ Ext _____

E. Application Type

Mark only one permit application type and answer the supplementary question appropriate for the type marked.

☐ Initial Permit ☑ Renewal ☐ Significant Mod ☐ Minor Permit Mod(MPM)

☐ Group Processing, MPM ☐ Administrative Amendment

For initial permits, when did operations commence? _____ /_____ /_____

For permit renewal, what is the expiration date of current permit? 09 / 19 / 2025

F. Applicable Requirement Summary

Mark the types of applicable requirements that apply:

☐ SIP	☐ FIP/TIP	☐ PSD	☐ Non-attainment NSR
☐ Minor source NSR	☑ Section 111	☐ Phase I acid rain	☐ Phase II acid rain
☐ Stratospheric ozone	☐ OCS regulations	☐ NESHAP	☑ Sec. 112(d) MACT
☐ Sec. 112(g) MACT	☐ Early reduction of HAP	☐ Sec 112(j) MACT	☐ RMP [Sec.112(r)]
☐ Section 129	☐ NAAQS, increments or visibility but for temporary sources (This is rare)		

Is the source subject to the Deepwater Port Act? ☐ YES ☑ NO

Has a risk management plan been registered? ☐ YES ☑ NO Agency _____

Phase II acid rain application submitted? ☐ YES ☑ NO If YES, Permitting Authority _____

G. Source-Wide PTE Restrictions and Generic Applicable Requirements

Cite and describe any emissions-limiting requirements and/or facility-wide "generic" applicable requirements.

Federal Operating Permit Program - 40 CFR Part 71
FARR- Total PM in Stacks, Visible Emisisons, Sulfur, Open Burning, Fugitive PM - Part 49
NSPS for Boilers - S in Fuel, Work Practice, Record Keeping - 40 CFR Part 60
Boiler NESHAP Subpart DDDDD
Plywood and Composit Wood Products MACT - 40 CFR Part 63 Subpart DDDD

H. Process Description

List processes, products, and SIC codes for the facility.

Process	Products	SIC
Sawmill	Lumber, wood by-products	2421

I. Emission Unit Identification

Assign an emissions unit ID and describe each emissions unit at the facility. Control equipment and/or alternative operating scenarios associated with emissions units should by listed on a separate line. Applicants may exclude from this list any insignificant emissions units or activities.

Emissions Unit ID	Description of Unit
Boilers 3,4	Large log Boilers
Kilns 1-7	Large log Kilns
HF 1,2	Small log and large log Hog Fuel Handling, respectively
SD 1,2	Small log and large log Sawdust Handling, respectively
GC 1,2	Small log and large log Green Chip Handling, respectively
DC 1,2	Small log and large log Dry Chip Handling, respectively
Sh 1,2	Small log and large log Shavings Handling, respectively
FD 1,2	Fugitive Dust from unpaved and paved roads, respectively

J. Facility Emissions Summary

Enter potential to emit (PTE) for the facility as a whole for each regulated air pollutant listed below. Enter the name of the single HAP emitted in the greatest amount and its PTE. For all pollutants, stipulations to major source status may be indicated by entering "major" in the space for PTE. Indicate the total actual emissions for fee purposes for the facility in the space provided. Applications for permit modifications need not include actual emissions information.

NOx 41.1 tons/yr VOC 232.7 tons/yr SO2 2.0 tons/yr

PM-10 39.2 tons/yr CO 23.7 tons/yr Lead 0 tons/yr

Total HAP 26.1 tons/yr

Single HAP with greatest amount Methanol PTE 19.2 tons/yr

Total of regulated pollutants (for fee calculation), Sec. F, line 5 of form FEE 74 tons/yr

K. Existing Federally-Enforceable Permits

Permit number(s) R10T5120000 Permit type Part 71 Permitting authority USEPA

Permit number(s) _____ Permit type _____ Permitting authority _____

L. Emission Unit(s) Covered by General Permits

Emission unit(s) subject to general permit _____

Check one: ☐ Application made ☐ Coverage granted

General permit identifier _____ Expiration Date ____/____/____

M. Cross-referenced Information

Does this application cross-reference information? ☐ YES ☑ NO (If yes, see instructions)

INSTRUCTIONS FOLLOW

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR FUEL COMBUSTION SOURCES (EUD-1)

A. General Information

Emissions unit ID Boilers 3,4 Description Large Log Mill Process Boiler

SIC Code (4-digit) NA SCC Code 10201302

B. Emissions Unit Description

Primary use Steam Generation to Operate Dry Kilns Temporary Source ☐ Yes ☐ No

Manufacturer Superior Boiler Model No. 6-5-5000

Serial Number #3 14159/#4 14922 Installation Date 4 / 1 / 2001

Boiler Type: ☑ Industrial boiler ☐ Process burner ☐ Electric utility boiler

Other (describe) _____

Boiler horsepower rating 1000 Boiler steam flow (lb/hr) 26,400 (estimated)

Type of Fuel-Burning Equipment (coal burning only):

☐ Hand fired ☐ Spreader stoker ☐ Underfeed stoker ☐ Overfeed stoker

☐ Traveling grate ☐ Shaking grate ☐ Pulverized, wet bed ☐ Pulverized, dry bed

Actual Heat Input 13.1 MM BTU/hr Max. Design Heat Input 33 MM BTU/hr

C. Fuel Data

Primary fuel type(s) LPG (HD-5) Standby fuel type(s)_____

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content (%)	Max. Ash Content (%)	BTU Value (cf, gal., or lb.)
LPG (ASTM D 1835 HD-5)	0.0123%	0%	21,580 Btu/lb

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
LPG (ASTM D 1835 HD-5)	1,914,466	328 gph	2,872,000 gpy

E. Associated Air Pollution Control Equipment

Emissions unit ID None Device type_____

Air pollutant(s) Controlled_____ Manufacturer_____

Model No._____ Serial No._____

Installation date_____/_____/_____ Control efficiency (%) _____

Efficiency estimation method_____

F. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (°F) _____._____ Design stack flow rate (ACFM) _____._____

Actual stack flow rate (ACFM) _____._____ Velocity (ft/sec) _____._____

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR PROCESS SOURCES (EUD-3)

A. General Information

Emissions unit ID Kiln 1-7 Description Lumber Drying Kilns

SIC Code (4-digit) _____ SCC Code_____

B. Emissions Unit Description

Primary use or equipment type Steam Operated Drying Kilns

Manufacturer COE Model No. Unknown

Serial No. Unknown Installation date 4 / 1 / 2001

Raw materials Green Wood

Finished products Dry Wood

Temporary source: ☑ No ☐ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	See attached calculations	See attached calculations
Maximum rate	See attached calculations	See attached calculations

D. Associated Air Pollution Control Equipment

Emissions unit ID None Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date _____/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled _____ Efficiency estimation method _____

E. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____.____ Velocity (ft/sec) _____.____

INSTRUCTIONS FOR EUD-3
EMISSIONS UNIT DESCRIPTION FOR PROCESS SOURCES

This form is designed to describe emissions units for processes for which forms EUD-1 or EUD-2 are not appropriate. For example, sources such as rock crushers and asphalt batch plants. This form will help you to collect and organize technical information, including operational characteristics, applicable requirements, compliance terms, and emissions for each emissions unit.

Section A - The emissions unit ID should be consistent with the one used in section I of form **GIS**. Enter the four-digit SIC code for the unit, which may be different form that used for the facility as a whole. In addition, complete the Source Classification Code (SCC), if known or available, but this is not mandatory.

Section B - There may be other information that the permitting authority will need to know that is not specifically requested on the forms and that should be included on attachments. Such information would include information needed to adequately identify the emissions unit and to determine its applicable requirements.

Section C - The amount of raw materials that are processed and/or the number of activities performed are values that are typically multiplied by emissions factors to calculate PTE and actual emissions.

Section D - Identify and describe any associated air pollution control device. Attach copies of correspondence from the vendor documenting these values, if available, or indicate how these values were otherwise determined (e.g., AP-42).

Section E - Complete this section only if ambient impact assessment is an applicable requirement or the facility is a temporary source. This is not common.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR PROCESS SOURCES (EUD-3)

A. General Information

Emissions unit ID SH 1/Cyclone 1 Description Shavings Handling System

SIC Code (4-digit) _____ SCC Code_____

B. Emissions Unit Description

Primary use or equipment type Pneumatic Converying System for Shavings Handling

Manufacturer American Sheet Metal Works Model No. Unknown

Serial No. Unkown Installation date Unkonwn/_____/_____

Raw materials Shavings

Finished products Shavings

Temporary source: ☑ No ☐ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	See attached calculations	See attached calculations
Maximum rate	See attached calculations	See attached calculations

D. Associated Air Pollution Control Equipment

Emissions unit ID SH 1/Cyclone 1 Device Type Cyclone

Manufacturer American Sheet Metal Works Model No_____

Serial No. Unkown Installation date Unkown/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) 99.975%.___

Air pollutant(s) controlled PM Efficiency estimation method Oregon DEQ EF

E. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____.____ Velocity (ft/sec) _____.____

INSTRUCTIONS FOR EUD-3
EMISSIONS UNIT DESCRIPTION FOR PROCESS SOURCES

This form is designed to describe emissions units for processes for which forms EUD-1 or EUD-2 are not appropriate. For example, sources such as rock crushers and asphalt batch plants. This form will help you to collect and organize technical information, including operational characteristics, applicable requirements, compliance terms, and emissions for each emissions unit.

Section A - The emissions unit ID should be consistent with the one used in section I of form **GIS**. Enter the four-digit SIC code for the unit, which may be different form that used for the facility as a whole. In addition, complete the Source Classification Code (SCC), if known or available, but this is not mandatory.

Section B - There may be other information that the permitting authority will need to know that is not specifically requested on the forms and that should be included on attachments. Such information would include information needed to adequately identify the emissions unit and to determine its applicable requirements.

Section C - The amount of raw materials that are processed and/or the number of activities performed are values that are typically multiplied by emissions factors to calculate PTE and actual emissions.

Section D - Identify and describe any associated air pollution control device. Attach copies of correspondence from the vendor documenting these values, if available, or indicate how these values were otherwise determined (e.g., AP-42).

Section E - Complete this section only if ambient impact assessment is an applicable requirement or the facility is a temporary source. This is not common.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR PROCESS SOURCES (EUD-3)

A. General Information

Emissions unit ID SH 2/Cyclone 2 Description Green Saw Dust Handling System

SIC Code (4-digit) _____ SCC Code_____

B. Emissions Unit Description

Primary use or equipment type Pneumatic Converying System for Green Saw Dust Handling

Manufacturer Rodrigue Metal Model No. Unknown

Serial No. Unkown Installation date Unkonwn/_____/_____

Raw materials Green Saw Dust

Finished products Green Saw Dust

Temporary source: ☑ No ☐ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	See attached calculations	See attached calculations
Maximum rate	See attached calculations	See attached calculations

D. Associated Air Pollution Control Equipment

Emissions unit ID SH 2/Cyclone 2 Device Type Multi-Clone

Manufacturer Rodrigue Metal Model No_____

Serial No. Unkown Installation date Unkown/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) 99.975%.___

Air pollutant(s) controlled PM Efficiency estimation method Oregon DEQ EF

E. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____.____ Velocity (ft/sec) _____.____

INSTRUCTIONS FOR EUD-3
EMISSIONS UNIT DESCRIPTION FOR PROCESS SOURCES

This form is designed to describe emissions units for processes for which forms EUD-1 or EUD-2 are not appropriate. For example, sources such as rock crushers and asphalt batch plants. This form will help you to collect and organize technical information, including operational characteristics, applicable requirements, compliance terms, and emissions for each emissions unit.

Section A - The emissions unit ID should be consistent with the one used in section I of form **GIS**. Enter the four-digit SIC code for the unit, which may be different form that used for the facility as a whole. In addition, complete the Source Classification Code (SCC), if known or available, but this is not mandatory.

Section B - There may be other information that the permitting authority will need to know that is not specifically requested on the forms and that should be included on attachments. Such information would include information needed to adequately identify the emissions unit and to determine its applicable requirements.

Section C - The amount of raw materials that are processed and/or the number of activities performed are values that are typically multiplied by emissions factors to calculate PTE and actual emissions.

Section D - Identify and describe any associated air pollution control device. Attach copies of correspondence from the vendor documenting these values, if available, or indicate how these values were otherwise determined (e.g., AP-42).

Section E - Complete this section only if ambient impact assessment is an applicable requirement or the facility is a temporary source. This is not common.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR PROCESS SOURCES (EUD-3)

A. General Information

Emissions unit ID GC 2/Cyclone 32 Description Green Chips Handling System

SIC Code (4-digit) _____ SCC Code_____

B. Emissions Unit Description

Primary use or equipment type Pneumatic Converying System for Green Chips Handling

Manufacturer Precision Husky Model No. Unknown

Serial No. Unkown Installation date Unkonwn/_____/_____

Raw materials Green Chips

Finished products Green Chips

Temporary source: ☑ No ☐ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	See attached calculations	See attached calculations
Maximum rate	See attached calculations	See attached calculations

D. Associated Air Pollution Control Equipment

Emissions unit ID GC 2/Cyclone 3 Device Type Cyclone

Manufacturer Precision Husky Model No_____

Serial No. Unkown Installation date Unkown/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) 99.975%.___

Air pollutant(s) controlled PM Efficiency estimation method Oregon DEQ EF

E. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____.____ Velocity (ft/sec) _____.____

INSTRUCTIONS FOR EUD-3
EMISSIONS UNIT DESCRIPTION FOR PROCESS SOURCES

This form is designed to describe emissions units for processes for which forms EUD-1 or EUD-2 are not appropriate. For example, sources such as rock crushers and asphalt batch plants. This form will help you to collect and organize technical information, including operational characteristics, applicable requirements, compliance terms, and emissions for each emissions unit.

Section A - The emissions unit ID should be consistent with the one used in section I of form **GIS**. Enter the four-digit SIC code for the unit, which may be different form that used for the facility as a whole. In addition, complete the Source Classification Code (SCC), if known or available, but this is not mandatory.

Section B - There may be other information that the permitting authority will need to know that is not specifically requested on the forms and that should be included on attachments. Such information would include information needed to adequately identify the emissions unit and to determine its applicable requirements.

Section C - The amount of raw materials that are processed and/or the number of activities performed are values that are typically multiplied by emissions factors to calculate PTE and actual emissions.

Section D - Identify and describe any associated air pollution control device. Attach copies of correspondence from the vendor documenting these values, if available, or indicate how these values were otherwise determined (e.g., AP-42).

Section E - Complete this section only if ambient impact assessment is an applicable requirement or the facility is a temporary source. This is not common.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR PROCESS SOURCES (EUD-3)

A. General Information

Emissions unit ID SH 2/Cyclone 4 Description Shavings Handling System

SIC Code (4-digit) _____ SCC Code_____

B. Emissions Unit Description

Primary use or equipment type Pneumatic Converying System for Shavings Handling

Manufacturer Rodrigue Metal Model No. Unknown

Serial No. Unkown Installation date Unkonwn/_____/_____

Raw materials Shavings

Finished products Shavings

Temporary source: ☑ No ☐ Yes

C. Activity or Production Rates

Activity or Production Rate	Amount/Hour	Amount/Year
Actual Rate	See attached calculations	See attached calculations
Maximum rate	See attached calculations	See attached calculations

D. Associated Air Pollution Control Equipment

Emissions unit ID SH 2/Cyclone 4 Device Type Cyclone

Manufacturer Rodrigue Metal Model No_____

Serial No. Unkown Installation date Unkown/_____/_____

Control efficiency (%) _____.___ Capture efficiency (%) 99.975%.___

Air pollutant(s) controlled PM Efficiency estimation method Oregon DEQ EF

E. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (This is not common)).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____.____ Velocity (ft/sec) _____.____

INSTRUCTIONS FOR EUD-3
EMISSIONS UNIT DESCRIPTION FOR PROCESS SOURCES

This form is designed to describe emissions units for processes for which forms EUD-1 or EUD-2 are not appropriate. For example, sources such as rock crushers and asphalt batch plants. This form will help you to collect and organize technical information, including operational characteristics, applicable requirements, compliance terms, and emissions for each emissions unit.

Section A - The emissions unit ID should be consistent with the one used in section I of form **GIS**. Enter the four-digit SIC code for the unit, which may be different form that used for the facility as a whole. In addition, complete the Source Classification Code (SCC), if known or available, but this is not mandatory.

Section B - There may be other information that the permitting authority will need to know that is not specifically requested on the forms and that should be included on attachments. Such information would include information needed to adequately identify the emissions unit and to determine its applicable requirements.

Section C - The amount of raw materials that are processed and/or the number of activities performed are values that are typically multiplied by emissions factors to calculate PTE and actual emissions.

Section D - Identify and describe any associated air pollution control device. Attach copies of correspondence from the vendor documenting these values, if available, or indicate how these values were otherwise determined (e.g., AP-42).

Section E - Complete this section only if ambient impact assessment is an applicable requirement or the facility is a temporary source. This is not common.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form **GIS**. If form **FEE** does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID Site Wide

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
SOx	0.6	0.5	2.0	
NOx	12.4	9.4	41.1	
CO	7.2	5.4	23.7	
VOC	38.4	53.1	232.7	
PM10	8.0	9.0	39.2	
HAP	1.6	6.0	26.1	
Methanol	1.1	4.4	19.2	

United States Environmental Protection Agency

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Federal Operating Permit Program (40 CFR Part 71)
POTENTIAL TO EMIT (PTE)

For each emissions unit at the facility, list the unit ID and the PTE of each air pollutant listed below and sum the values to determine the total PTE for the facility. It may be helpful to complete form **EMISS** before completing this form. Report each pollutant at each unit to the nearest tenth (0.1) of a ton; values may be reported with greater precision (i.e., more decimal places) if desired. Report facility total PTE for each listed pollutant on this form and in section **J** of form **GIS**. The HAP column is for the PTE of all HAPs for each unit. You may use an attachment to show any pollutants that may be present in major amounts that are not already listed on the form (this is not common).

Emissions Unit ID	Regulated Air Pollutants and Pollutants for which Source is Major (PTE in tons/yr)						
	NOx	VOC	SO2	PM10	CO	Lead	HAP
Site Wide	41.1	232.7	2.0	39.2	23.7	0.0	26.1
FACILITY TOTALS:							

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
INSIGNIFICANT EMISSIONS (IE)

On this page list each insignificant activity or emission unit. In the "number" column, indicate the number of units in this category. Descriptions should be brief but unique. Indicate which emissions criterion of part 71 is the basis for the exemption.

Number	Description of Activities or Emissions Units	RAP (except HAP)	HAP
2	***Saw Sharpening Metal Filings Handling***	***< 2 tpy***	***None***
7	***Oil Storage 12,000 gallons or fewer***	***< 2 tpy***	***None***
1	***Gasoline Fuel Storage 500 gallons***	***< 2 tpy***	***< 1,000 lbs/yr***

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): Boilers 3 and 4

Applicable Requirement (Describe and Cite)

Visible Emissions (VE) must not exceed 20% opacity. 49.124(2)(1).

Compliance Methods for the Above (Description and Citation):

EPA Method 9. 40 CFR 49.124(e)(1).

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): Boilers 3 and 4

Applicable Requirement (Description and Citation):

SO2 must not exceed 500 ppmv. 40 CFR Part 49.129(a)(1).

Compliance Methods for the Above (Description and Citation):

Exclusive use of HD-5 LPG resulting in max stack concentration of 5 ppmv.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): Boilers 3 and 4

Applicable Requirement (Describe and Cite)

PM Emissions must not exceed 0.1 gr/dscf. 40 CFR 49.125.

Compliance Methods for the Above (Description and Citation):

Exclusive use of HD-5 LPG resulting in max stack concentration of 0.001 gr/dscf.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): Boilers 3 and 4

Applicable Requirement (Description and Citation):

Sulfur must not exceed 400 ppm in fuel. 40 CFR Part 49.130.

Compliance Methods for the Above (Description and Citation):

Exclusive use of HD-5 LPG resulting in max fuel concentration of 123 ppmv.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): Boilers 3 and 4

Applicable Requirement (Describe and Cite)

Energy assessment and tune-up. 40 CFR Part 63.7510.

Compliance Methods for the Above (Description and Citation):

Energy assessment completed. Boilers tuned up aat least every 5 years.

Compliance Status:

[✔] In Compliance: Will you continue to comply up to permit issuance? [✔] Yes [ ] No

[ ] Not In Compliance: Will you be in compliance at permit issuance? [ ] Yes [ ] No

[ ] Future-Effective Requirement: Do you expect to meet this on a timely basis? [ ] Yes [ ] No

Emission Unit ID(s): Boilers 3 and 4

Applicable Requirement (Description and Citation):

Sulfur must not exceed 0.5% in fuel. 40 CFR Part 60.42c.

Compliance Methods for the Above (Description and Citation):

Exclusive use of HD-5 LPG resulting in max fuel concentration of 123 ppmv.

Compliance Status:

[✔] In Compliance: Will you continue to comply up to permit issuance? [✔] Yes [ ] No

[ ] Not In Compliance: Will you be in compliance at permit issuance? [ ] Yes [ ] No

[ ] Future-Effective Requirement: Do you expect to meet this on a timely basis? [ ] Yes [ ] No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): Kilns 1 - 7

Applicable Requirement (Describe and Cite)

Visible Emissions (VE) must not exceed 20% opacity. 49.124(2)(1).

Compliance Methods for the Above (Description and Citation):

Kiln's emit only steam and therefore are exempted per 49.124(2)(1).

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s):

Applicable Requirement (Description and Citation):

Compliance Methods for the Above (Description and Citation):

Compliance Status:

☐ In Compliance: Will you continue to comply up to permit issuance? ☐ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): Kilns 1 - 7

Applicable Requirement (Describe and Cite)

PM Emissions must not exceed 0.1 gr/dscf. 49.125.

Compliance Methods for the Above (Description and Citation):

Kiln's do not emit PM.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): Kilns 1 - 7

Applicable Requirement (Description and Citation):

Submittal of Initial Notification. 40 CFR Part 63 Subpart DDDD Sectoin 63.9(b)

Compliance Methods for the Above (Description and Citation):

Initial Notifcation was provided in December 2009.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): HF 2, GC 2, SH 1 & 2

Applicable Requirement (Describe and Cite)

PM Emissions must not exceed 0.1 gr/dscf. 49.125.

Compliance Methods for the Above (Description and Citation):

Calculations show that these sources are less than 0.1 gr/dscf.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): HF 1 & 2, SD 1 & 2, GC 1 & 2, DC 1 & 2, SH 1 & 2, FD 1 & 2

Applicable Requirement (Description and Citation):

Visible Emissions (VE) must not exceed 20% opacity. 49.124(2)(1).

Compliance Methods for the Above (Description and Citation):

EPA Method 9. 40 CFR 49.124(e)(1).

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): General/Source Wide

Applicable Requirement (Describe and Cite)

Asbestos inspection prior to demolition/renovation. 40 CFR Part 61, Subpart M 61.145.

Compliance Methods for the Above (Description and Citation):

YFP plans to comply when applicable.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): HF 1 & 2, SD 1 & 2, GC 1 & 2, DC 1 & 2, SH 1 & 2, FD 1 & 2

Applicable Requirement (Description and Citation):

Fugitive Particulate Matter Limits. 40 CFR Part 49.126

Compliance Methods for the Above (Description and Citation):

Conduct survey and prepare plan per 49.126(e)(1).

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

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SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): General/Source Wide

Applicable Requirement (Describe and Cite)

FARR Annual Report. 40 CFR 49.138(f)

Compliance Methods for the Above (Description and Citation):

Reports have been submitted since 2003.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): General/Source Wide

Applicable Requirement (Description and Citation):

Refrigerant Management. 40 CFR Part 82, Subpart F.

Compliance Methods for the Above (Description and Citation):

YFP outsources all refrigerant services to compliant providers.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2025

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): General/Source Wide

Applicable Requirement (Describe and Cite)

Title V/Part 71 Renewal. 40 CFR Part 71.5(a).

Compliance Methods for the Above (Description and Citation):

Renewal application will be submitted after March 21 deadline.

Compliance Status:

☐ In Compliance: Will you continue to comply up to permit issuance? ☐ Yes ☐ No

☑ Not In Compliance: Will you be in compliance at permit issuance? ☑ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

Emission Unit ID(s): General/Source Wide

Applicable Requirement (Description and Citation):

Annual Fees and Compliance Certification. 40 CFR Part 71.9

Compliance Methods for the Above (Description and Citation):

Fees and Certification have been provided since 2003.

Compliance Status:

☑ In Compliance: Will you continue to comply up to permit issuance? ☑ Yes ☐ No

☐ Not In Compliance: Will you be in compliance at permit issuance? ☐ Yes ☐ No

☐ Future-Effective Requirement: Do you expect to meet this on a timely basis? ☐ Yes ☐ No

B. SCHEDULE OF COMPLIANCE

Complete this section if you answered "NO" to any of the questions in section A. Also, complete this section if required to submit a schedule of compliance by an applicable requirement. Please attach copies of any judicial consent decrees or administrative orders for this requirement.

Unit(s)_____ Requirement_____

Reason for Noncompliance. Briefly explain reason for noncompliance at time of permit issuance or that future-effective requirement will not be met on a timely basis:

Narrative Description of how Source Compliance Will be Achieved. Briefly explain your plan for achieving compliance:

Schedule of Compliance. Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved

C. SCHEDULE FOR SUBMISSION OF PROGRESS REPORTS

Only complete this section if you are required to submit one or more schedules of compliance in section B or if an applicable requirement requires submittal of a progress report. If a schedule of compliance is required, your progress report should start within 6 months of application submittal and subsequently, no less than every six months. One progress report may include information on multiple schedules of compliance.

Contents of Progress Report (describe):

First Report____/____/___ Frequency of Submittal_____

Contents of Progress Report (describe):

First Report____/____/___ Frequency of Submittal_____

D. SCHEDULE FOR SUBMISSION OF COMPLIANCE CERTIFICATIONS

This section must be completed once by every source. Indicate when you would prefer to submit compliance certifications during the term of your permit (at least once per year).

Frequency of submittal_____ Beginning 4 / 1 / 2026

E. COMPLIANCE WITH ENHANCED MONITORING & COMPLIANCE CERTIFICATION REQUIREMENTS

This section must be completed once by every source. To certify compliance with these, you must be able to certify compliance for every applicable requirement related to monitoring and compliance certification at every unit.

Enhanced Monitoring Requirements: ☑ In Compliance ☐ Not In Compliance

Compliance Certification Requirements: ☑ In Compliance ☐ Not In Compliance

Attachment 2
Fee Forms and Emissions Calculations for CY 2024

Table 1
Yakama Forest Products
Annual Emission Estimate
Input Data

Unit Fee	$63.85	per ton
Calender year	2024	

Operating Condition	Units	Actual Annual Value
Species Cut		
Grand Fir	mbf/yr	221
Douglas Fir	mbf/yr	7,746
Pine	mbf/yr	23,175
Total	mbf/yr	31,142
By Products		
Shavings	bdt/yr	6,139
Hog Fuel	bdt/yr	5,989
Green (Kraft) Chips	bdt/yr	13,232
Dry Chips	bdt/yr	0
Sawdust	bdt/yr	7,868
Small Log Mill		
Boiler Operating Hours	hrs/yr/boiler	Out of Service
Boiler Fuel	gal/yr	Out of Service
Large Log Mill		
Boiler Operating Hours (#3)	hrs/yr/boiler	7,894
Boiler Operating Hours (#4)	hrs/yr/boiler	6,227
Boiler Fuel (LPG)	gal/yr	1,914,466

Table 2
Yakama Forest Products
Annual Emission Estimate
Section D Form

Calender year **2024**

Emission Unit	Unit ID		NOx	VOC	SO2	PM10	Lead	Total
Boiler	**Boiler**	**1**	Out of Service					
Boiler	**Boiler**	**2**						
Boiler	**Boiler**	**3**	6.2	0.5	0.3	0.3	0.0	7.3
Boiler	**Boiler**	**4**	6.2	0.5	0.3	0.3	0.0	7.3
Drying Kiln	**Kiln**	**1-7**		31.7		0.8		32.5
Cyclone	**C**	**1**		0.0		0.0		0.0
Cyclone	**C**	**2**		1.7		1.7		3.4
Cyclone	**C**	**3**		2.6		2.8		5.4
Cyclone	**C**	**4**		1.4		1.3		2.7
Hog Fuel H&S	**HF**	**1**				0.0		0.0
Hog Fuel H&S	**HF**	**2**				0.0		0.0
Sawdust H&S	**SD**	**1**				0.0		0.0
Sawdust H&S	**SD**	**2**				0.0		0.0
Green Chip H&S	**GC**	**1**				0.0		0.0
Green Chip H&S	**GC**	**2**				0.0		0.0
Dry Chip H&S	**DC**	**1**				0.0		0.0
Dry Chip H&S	**DC**	**2**				0.0		0.0
Shavings H&S	**SH**	**1**				0.0		0.0
Shavings H&S	**SH**	**2**				0.0		0.0
MFA						0.8		0.8
MNFA						0.8		0.8
Unpaved Roads	**FD**	**1**				7.5		7.5
Paved Roads	**FD**	**2**				6.3		6.3
Subtotals			**12.4**	**38.4**	**0.6**	**22.7**	**0.0**	**74.1**

Table 3
Yakama Forest Products
Annual Emission Estimate
Section E Form

Calender year **2024**

Name of HAP	CAS No.	Identifier		HAP Emission by Unit (t/y) Kilns 1-7	Mill	Subtotals	VOC Subtotal
Methanol	67561	HAP	1	0.84	0.22	1.059	1.0592
Formaldehyde	50000	HAP	2	0.04		0.038	0.0381
Acetaldehyde	75070	HAP	3	0.51		0.507	0.5066
Propionaldehyde	123386	HAP	4	0.01		0.013	0.0128
Acrolein	107028	HAP	5	0.03		0.032	0.0321
Total				1.4309	0.2179	1.649	1.649

Table 4
Yakama Forest Products
Annual Emission Estimate
Section F Form

Total Criteria Pollutants		74.13
Total HAPS		1.65
	Subtotal	75.78
VOC HAPS		1.65
Total Emissions		74.13
	(Rounded)	74
Unit Cost		$63.85
Total Fee		$4,724.90

Table 5
Yakama Forest Products
Emissions Summary

Emissions Source	Pollutants (tpy) SOx	NOx	CO	VOC	TP	PM10	PM25	HAP	Data Source
Actual Emissions									
Boiler	**0.6**	**12.4**	**7.2**	**1.0**	**0.7**	**0.7**	**0.7**	**0.0**	**All emission factors from Title V Permit**
Kiln				**31.7**	**0.8**	**0.8**		**1.4**	**unless otherwise noted on detail**
Mill				**5.7**	**6.8**	**5.8**	**3.4**	**0.22**	**worksheets.**
Misc. Non-fugitive Activities					**1.6**	**0.8**	**0.40**		
Misc. Fugitive Activities					1.7	0.8	0.42		
Fugitive Dust					13.8	13.8			
Total	**0.62**	**12.4**	**7.2**	**38.4**	**25.4**	**22.7**	**4.9**	**1.6**	
Total Point Source	**0.62**	**12.4**	**7.2**	**38.4**	**9.9**	**8.0**	**4.5**	**1.6**	

Notes:
1. Boldface values are point sources.

Table 6
Yakama Forest Products
Boiler Emissions Calculations - Actual

LPG
ASTM D 1835 Special Duty (HD-5)

Boiler Input Data — **Data for Actual Emissions Calcuation**

Paramter	Units	SLM Boiler 1	SLM Boiler 2	Total 1 & 2	LLM Boiler 3	LLM Boiler 4	Total 3 & 4
Use Factor		Out of Service	Out of Service		40%	31%	
Size	MMBTU/hr				30	30	
Fuel					LPG	LPG	
	Sulfur (ppmw)				123	123	
	Sulfur (gr/100 ft3)				6.5	6.5	
	#/gallon				4.240	4.240	
	gph				135.6	135.6	
	BTU/#				21,580	21,580	
	gal/yr				1,070,235	844,231	1,914,466
Fuel Heat Value	Mbtu/gal				91.5	91.5	
Annual Heat Load	Mmbtu/yr				97,927	77,247	175,174
Annual Op	hrs/yr				7,894.0	6,227.0	

Actual Emissions

Large Boilers (Boilers 3 and 4 combined)

	Pollutants						
Parameter	**SO2**	**NOx**	**CO**	**VOC**	**PM**	**PM10**	**PM25**
Calc'd Factors	0.1						
(#/1000 gallons)	0.65	13	7.5	1	0.7	0.7	0.7
Emissions							
(#/yr)	1,236	24,888	14,358	1,914	1,340	1,340	1,340
(ton/yr)	**0.62**	**12.4**	**7.2**	**1.0**	**0.7**	**0.7**	**0.7**
Value Used (tpy)	**0.62**	**12.4**	**7.2**	**1.0**	**0.7**	**0.7**	**0.7**
Total Emissions	**0.62**	**12.44**	**7.18**	**0.96**	**0.67**	**0.67**	**0.67**

Notes:
1. No HAPS listed as actual emissions because of no propane HAP emission factors.

Table 7
Yakama Forest Products
Kiln Emissions Calculations - Actual Emissions

Actual Production

Log Species	Small Log mbf/yr	Large Log mbf/yr	Total mbf/yr
Grand Fir	Out of Service	221	221
Douglas Fir		7,746	7,746
Total Fir		7,967	7,967
Pine		23,175	23,175

		Pollutant								
		Criteria			HAPS					
Component		**PM**	**PM10**	**VOC**	**Total**	Methanol	Formaldehyde	Acetaldehyde	Propionaldehyde	Acrolein
Equation Parameters (aT-b = EF)										
Grand Fir	a			0.00817		0.00465	0.00016			
	b			1.02133		0.7336	0.02764			
Douglas Fir	a			0.0146		0.00114	0.000028			
	b			1.7713		0.1609	0.0038			
Ponderosa Pine	a			0.02083		0.00137	0.000074			
	b			1.30029		0.18979	0.010457			
Emission Factor (#/MBF)										
	Temp oF									
Grand Fir	180	0.05	0.05	0.44927	0.16036	0.1034	0.00116	0.055	0.0003	0.0005
Douglas Fir	180	0.05	0.05	0.8567	0.07384	0.0443	0.00124	0.0275	0.0003	0.0005
Ponderosa Pine	180	0.05	0.05	2.44911	0.097273	0.05681	0.002863	0.034	0.001	0.0026
Actual Emissions (ton/yr)										
Small Log		Out of Service								
Kilns 1 - 7		0.78	0.78	31.7	1.4	0.8	0.038	0.5	0.013	0.032
Total Kiln		0.78	0.78	31.7	1.4	0.8	0.038	0.5	0.013	0.032

Notes:
1. Emission factors (PM) from OREGON DEQ AQ-EF02
2. Emission factors (VOC & HAP) from USEPA Region X (Nov 2019).

Species	WPP1 VOC[1,2] (lb/mbf)	Methanol[2] (lb/mbf)	Formaldehyde[2] (lb/mbf)	Acetaldehyde (lb/mbf)	Propionaldehyde (lb/mbf)	Acrolein (lb/mbf)
Non-Resinous Softwood Species						
Western True Firs[3]	0.00817x - 1.02133	0.00465x - 0.73360	0.00016x - 0.02764	0.0550	no data	no data
Western Hemlock	0.00369x - 0.39197	0.00249x - 0.39750	0.000046x - 0.007622	0.0677	0.0004	0.0012
Western Red Cedar	0.00817x - 1.02133	0.00465x - 0.73360	0.00016x - 0.02764	0.0677	0.0004	0.0012
Resinous Softwood Species (Non-Pine Family)						
Douglas Fir	0.01460x - 1.77130	0.00114x - 0.16090	0.000028x - 0.003800	0.0275	0.0003	0.0005
Engelmann Spruce	0.1769	0.00088x - 0.13526	0.000042x - 0.006529	0.0201	0.0002	0.0005
Larch	0.01460x - 1.77130	0.00114x - 0.16090	0.000028x - 0.003800	0.0275	0.0003	0.0005
Resinous Softwood Species (Pine Family)						
Lodgepole Pine	1.1352	0.0550	0.0030	no data	no data	no data
Ponderosa Pine	0.02083x - 1.30029	0.00137x - 0.18979	0.000074x - 0.010457	0.0340	0.0010	0.0026
Western White Pine	0.02083x - 1.30029	0.00137x - 0.18979	0.000074x - 0.010457	0.0340	0.0010	0.0026

Table 8
Yakama Forest Products
Mill Emissions Calculations - Summary

Loadings Summary

Component	Units	Smalll Log Mill				Large Log Mill				Total
		Grand Fir	Douglas Fir	Pine	Total	Grand Fir	Douglas Fir	Pine	Total	
Total BF	MMBF/yr	0	0	0	0	221	7,746	23,175	31,142	31,142
Hog Fuel	bdtpy	0	0	0	0	43	1,490	4,457	5,989	5,989
Green Chips	bdtpy	0	0	0	0	94	3,291	9,846	13,232	13,232
Dry Chips	bdtpy	0	0	0	0	0	0	0	0	0
Sawdust	bdtpy	0	0	0	0	56	1,957	5,855	7,868	7,868
Shavings	bdtpy	0	0	0	0	44	1,527	4,569	6,139	6,139

Emissions Summary

Parameter	Units	Cyclones				Bins										Mill Total
		C-1	C-2	C-3	C-4	HF1	HF2	SD1	SD2	GC1	GC2	DC1	DC2	SH1	SH2	
		SLM	LLM	LLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	
		Shavings	Sawdust	Green Chips	Shavings	Hog Fuel		Sawdust		Green Chips		Dry Chips		Shavings		
PM	tpy	0.00	1.97	3.31	1.53	0.0000	0.0045	0.0000	0.0030	0.0000	0.0050	0.0000	0.0000	0.0000	0.0046	6.83
PM10	tpy	0.00	1.67	2.81	1.30	0.0000	0.0021	0.0000	0.0014	0.0000	0.0023	0.0000	0.0000	0.0000	0.0021	5.80
PM25	tpy	0.00	0.98	1.65	0.77	0.0000	0.0003	0.0000	0.0002	0.0000	0.0003	0.0000	0.0000	0.0000	0.0003	3.41
VOC	tpy	0.00	1.71	2.59	1.36											5.66
Methanol	tpy	0.00	0.06	0.11	0.05											0.22

Table 9
Yakama Forest Products
Cyclone Emissions

Parameter	Units	Cyclones			
Source ID		C-1	C-2	C-3	C-4
Location		SLM	LLM	LLM	LLM
Material		Shavings	Sawdust	Green Chips	Shavings
Loadings					
Grand Fir	bdtpy	0	56	94	44
Douglas Fir	bdtpy	0	1,957	3,291	1,527
Pine	bdtpy	0	5,855	9,846	4,569
Total	bdtpy	0	7,868	13,232	6,139
Emission Factors					
PM	#/bdt	0.50	0.50	0.50	0.50
PM10	#/bdt	0.43	0.43	0.43	0.43
PM25	#/bdt	0.25	0.25	0.25	0.25
VOC					
Grand Fir	#/bdt	0.2692	0.2386	0.0734	0.2692
Douglas Fir	#/bdt	0.2692	0.2386	0.0734	0.2692
Pine	#/bdt	0.5017	0.5017	0.5017	0.5017
Methanol	#/bdt	0.016	0.016	0.016	0.016
Emissions					
PM	t/yr	0.0	2.0	3.3	1.5
PM10	t/yr	0.0	1.7	2.8	1.3
PM25	t/yr	0.0	1.0	1.7	0.8
VOC	t/yr	0.0	1.7	2.6	1.4

Table 10
Yakama Forest Products
Bin Emissions

Parameter	**Units**	**Bins**									
Source ID		HF1	HF2	SD1	SD2	GC1	GC2	DC1	DC2	SH1	SH2
Location		SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM
Material		Hog Fuel		Sawdust		Green Chips		Dry Chips		Shavings	
Loadings	bdtpy	0	5,989	0	7,868	0	13,232	0	0	0	6,139
Emission Factors											
Filling											
PM	#/bdt	0.00075	0.00075	0.00075	Cyclone C-2	0.00075	Cyclone C-3	0.0015	0.0015	Cyclone C-1	Cyclone C-4
PM10	#/bdt	0.00035	0.00035	0.00035		0.00035		0.0007	0.0007		
PM25	#/bdt	0.00005	0.00005	0.00005		0.00005		0.0001	0.0001		
Truck Loading											
PM	#/bdt	0.00075	0.00075	0.00075	0.00075	0.00075	0.00075	0.0015	0.0015	0.0015	0.0015
PM10	#/bdt	0.00035	0.00035	0.00035	0.00035	0.00035	0.00035	0.0007	0.0007	0.0007	0.0007
PM25	#/bdt	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.0001	0.0001	0.0001
Emissions											
Filling											
PM	tpy	0.0000	0.0022	0.0000	Cyclone C-2	0.0000	Cyclone C-3	0.0000	0.0000	Cyclone C-1	Cyclone C-4
PM10	tpy	0.0000	0.0010	0.0000		0.0000		0.0000	0.0000		
PM25	tpy	0.0000	0.0001	0.0000		0.0000		0.0000	0.0000		
Truck Loading											
PM	tpy	0.0000	0.0022	0.0000	0.0030	0.0000	0.0050	0.0000	0.0000	0.0000	0.0046
PM10	tpy	0.0000	0.0010	0.0000	0.0014	0.0000	0.0023	0.0000	0.0000	0.0000	0.0021
PM25	tpy	0.0000	0.0001	0.0000	0.0002	0.0000	0.0003	0.0000	0.0000	0.0000	0.0003
Total											
PM	tpy	0.0000	0.0045	0.0000	0.0030	0.0000	0.0050	0.0000	0.0000	0.0000	0.0046
PM10	tpy	0.0000	0.0021	0.0000	0.0014	0.0000	0.0023	0.0000	0.0000	0.0000	0.0021
PM25	tpy	0.0000	0.0003	0.0000	0.0002	0.0000	0.0003	0.0000	0.0000	0.0000	0.0003

Note:
1. All emissions factors from Title V Permit

Table 11
Yakama Forest Products
Miscellaneous Non-fugitive Activities

Parameter	Units	Sawing Inside Buildings		Total
Location		SLM	LLM	
Loadings	tpy Logs	0	45,397	45,397
Emission Factors				
PM	#/tpy logs	0.35	0.35	
PM10	#/tpy logs	0.175	0.175	
PM25	#/tpy logs	0.0875	0.0875	
Control Efficiency		80%	80%	
Emissions				
PM	t/yr	0.0	1.6	1.6
PM10	t/yr	0.0	0.8	0.8
PM25	t/yr	0.0	0.4	0.4

Note:
1. All emissions factors from Title V Permit

Table 12
Yakama Forest Products
Miscellaneious Fugitive Activities

Parameter	Units	Sawing		Debarking		Hog Fuel Handling: Conveyance to Hog		Hog Fuel Handling: Hog		Hog Fuel Handling: Conveyance from Hog		Wind Erosion		Total
Location		SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	
Loadings	tpy Logs	0	45,397	0	45,397									
	bdt/yr					0	5,989	0	5,989	0	5,989			
	Acres											17	7	
Emission Factors														
PM	#/*	0.035	0.035	0.035	0.035	0.00075	0.00075	0.024	0.024	0.00075	0.00075	0.38	0.38	
PM10	#/*	0.0175	0.0175	0.0175	0.0175	0.00035	0.00035	0.012	0.012	0.00035	0.00035	0.190	0.190	
PM25	#/*	0.00875	0.00875	0.00875	0.00875	0.00005	0.00005	0.0060	0.0060	0.00005	0.00005	0.0950	0.0950	
Control Efficiency		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Emissions														
PM	t/yr	0.0	0.8	0.0	0.8	0.0000	0.0022	0.0000	0.0719	0.0000	0.0022	0.0032	0.0013	1.7
PM10	t/yr	0.0	0.4	0.0	0.4	0.0000	0.0010	0.0000	0.0359	0.0000	0.0010	0.0016	0.0007	0.8
PM25	t/yr	0.0	0.2	0.0	0.2	0.0000	0.0001	0.0000	0.0180	0.0000	0.0001	0.0008	0.0003	0.4

Note:
1. All emissions factors from Title V Permit
2. Wind erosion area is only for unpave area.

Table 13
Yakama Forest Products
Fugitive Dust Emissions Calculations

Paved EF Values		
Particle Size (PM10)	0.016	#/VMT
Silt Loading	7.4	gm/m2

Unpaved EF Values			
Particle Size	2.6	#/VMT	
Silt Content	8.4	%	
Surface Moisture	0.2	%	
Precip Days	200	Days	(Site is watered down 130 days per year)

Employee Vehicles and Product Pickup/Delivery (All paved roads)

Vehicle	Weight (pounds)	veh/d	Days/yr	Trips/yr	Dist/RT (ft)	VMT/yr	EF (#/VMT)	PM10 (ton/yr)
Employee Vehicles	5,000	60	340	20,400	1,200	4,636	0.0285	0.07
Product Loadout	60,000	48	340	16,320	1,200	3,709	1.1843	2.20
							Total PM10	**2.26**

Yard Equipment Inventory

Vehicle	Location	Maximum Hours Per Day	Maximum Hours Per year	Average Hours per year (0.75)	Maximum Vehicle Speed (mph)	Average Vehicle Speed (mph) (0.5)	Maximum Gross Vehicle Weight (pounds)	Vehicle Empty Weight (pounds) (0.5)	Average Gross Weight Laden (pounds) (0.5)	% Paved	% Unpaved	Annual VMT	VMT Paved	VMT Unpaved	Hours Unpaved
Forklifts															
H-360 HD	SM-3	18	4,320	3,240	4	2	41,200	20,600	30,900	100%	0%	6480	6480	0	0
H-360 HD	PM-3	12	2,880	2,160	4	2	41,200	20,600	30,900	100%	0%	4320	4320	0	0
H-360 HD	PM/KILN-3	16	3,840	2,880	4	2	41,200	20,600	30,900	100%	0%	5760	5760	0	0
H-360 HD	KILN-	16	3,840	2,880	4	2	41,200	20,600	30,900	100%	0%	5760	5760	0	0
H-280	SM-2	9	2,160	1,620	4	2	34,800	17,400	26,100	100%	0%	3240	3240	0	0
H-280	PM-2	9	2,160	1,620	4	2	34,800	17,400	26,100	100%	0%	3240	3240	0	0
H-190 HD	SHIPPING-3	12	2,880	2,160	4	2	26,300	13,150	19,725	100%	0%	4320	4320	0	0
H-190 HD	SHIPPING-3	12	2,880	2,160	4	2	26,300	13,150	19,725	100%	0%	4320	4320	0	0
H-190 HD	SHIPPING-3	12	2,880	2,160	4	2	26,300	13,150	19,725	100%	0%	4320	4320	0	0
H-190 HD	PM-3	11	2,640	1,980	4	2	26,300	13,150	19,725	100%	0%	3960	3960	0	0
H-190 HD	PM-3	11	2,640	1,980	4	2	26,300	13,150	19,725	100%	0%	3960	3960	0	0
H-190	PM-2	9	2,160	1,620	3	2	26,300	13,150	19,725	100%	0%	2430	2430	0	0
H-190	PM/SHIP-2	10	2,400	1,800	3	2	26,300	13,150	19,725	100%	0%	2700	2700	0	0
H-190	SHIPPING-2	11	2,640	1,980	3	2	26,300	13,150	19,725	100%	0%	2970	2970	0	0
H-155	SM-2	2	480	360	2	1	13,500	6,750	10,125	100%	0%	360	360	0	0
LULL	SM-2	1	240	180	2	1	9,000	4,500	6,750	90%	10%	180	162	18	18
TRACTOR	SM-2	3	720	540	1	1	7,500	3,750	5,625	90%	10%	270	243	27	54
Yard Equipment															
CAT 950	MERCH	9	2,160	1,620	6	3	42,520	21,260	31,890	99%	1%	4860	4,811	49	16.2
CAT 950	MERCH	9	2,160	1,620	6	3	42,520	21,260	31,890	99%	1%	4860	4,811	49	16.2
CAT 950	MERCH	9	2,160	1,620	6	3	42,520	21,260	31,890	99%	1%	4860	4,811	49	16.2
JD-200	MERCH	9	2,160	1,620	1	1	50,000	25,000	37,500	99%	1%	810	802	8	16.2
LETRO	P-2	9	2,160	1,620	3	2	90,000	45,000	67,500	1%	99%	2430	24	2,406	1603.8
LETRO	P-2	9	2,160	1,620	3	2	90,000	45,000	67,500	15%	85%	2430	365	2,066	1377
LETRO	P-3	18	4,320	3,240	5	3	140,000	70,000	105,000	99%	1%	8100	8,019	81	32.4
LETRO	P-3	9	1,800	1,350	5	3	140,000	70,000	105,000	99%	1%	3375	3,341	34	13.5
JD-744	P-2	9	1,800	1,350	3	2	51,920	25,960	38,940	1%	99%	2025	20	2,005	1336.5
JD-744	P-2	9	1,800	1,350	3	2	51,920	25,960	38,940	1%	99%	2025	20	2,005	1336.5
CAT 966	P-2	9	1,800	1,350	3	2	51,980	25,990	38,985	1%	99%	2025	20	2,005	1336.5
CAT 966	P-3	9	1,800	1,350	7	4	52,720	26,360	39,540	99%	1%	4725	4,678	47	13.5
CAT 966	P-3	9	1,800	1,350	7	4	52,720	26,360	39,540	99%	1%	4725	4,678	47	13.5
HITACHI	P-2	9	1,800	1,350	1	1	81,000	40,500	60,750	99%	1%	675	668	7	13.5
HITACHI	P-2	9	1,800	1,350	1	1	81,000	40,500	60,750	1%	99%	675	7	668	1336.5
MADILL	P-3	9	1,800	1,350	1	1	99,800	49,900	74,850	99%	1%	675	668	7	13.5
MADILL	P-3	9	1,800	1,350	1	1	99,800	49,900	74,850	1%	99%	675	7	668	1336.5
WATER 1	P-2&3	8	1,040	780	10	5	49,860	24,930	37,395	50%	50%	3900	1,950	1,950	390
WATER 2	P-2&3	8	1,040	780	10	5	52,180	26,090	39,135	50%	50%	3900	1,950	1,950	390
WATER 3	P-2&3	8	1,040	780	10	5	51,920	25,960	38,940	50%	50%	3900	1,950	1,950	390
						Averages	51,059	25,529	38,294		Totals	120,240	102,146	18,094	11,070
						Average Vehicle Weight -->			31,912			Average Unpaved Speed -->			1.63

Notes:
1. Emission Factors from AP-42 Section 13.2

$$EF_{Paved} = k\left(\frac{S_L}{2}\right)^{0.65}\left(\frac{W}{3}\right)^{1.5}$$

$$EF_{Unpaved} = k\left(\frac{\left(\frac{s}{12}\right)^{0.8}\left(\frac{W}{3}\right)^{0.4}}{\left(\frac{M}{0.2}\right)^{0.3}}\right)\frac{S}{15}\frac{(365-P)}{365}$$

where k = PM10 multiplier (#/yr), SL = Paved road silt loading (gm/m2),
W = vehicle weight (tons), s = surface material silt content (%), M = soil moisure (%)
S = speed (mph), and P = number of days of measurable precipitation.

Yard Emission Factor Calculation

Variable	Units	Paved	Unpaved
k	#/VMT	0.016	2.6
SL	gm/m2	7.4	
W	tons	15.96	15.96
s	%		8.4
S	mph		1.63
M	%		0.2
P	Days		200
EF	#/VMT	0.46	0.64
Total miles	miles	120,240	102,146
Emisisons	pounds	55,233	65,542

Total Fugitve Dust Emissions		
Yard Paved	55,233	Pounds
Yard Unpaved	65,542	Pounds
Employees	0.07	Pounds
Trucks	2.20	Pounds
Total	120,777	Pounds
	60.39	**tons**

Total Fugtive Dust Emissions		
Paved	55,236	Pounds
	27.62	Tons
Unpaved	65,542	Pounds
	32.77	Tons
Total	120,777	Pounds
	60.39	**Tons**

			ProRated Value	
Lumber Production (mbf/yr)	Baseline	135,988	6.32	Paved
	Actual	31,142	7.50	Unpaved
	ProRate	23%	**13.83 Tons**	Total

Attachment 3
Potential to Emit Calculations

Table 1
Yakama Forest Products
Potential to Emit
Emissions Summary

	Pollutants (tpy)									
Emissions Source	**SOx**	**NOx**	**CO**	**VOC**	**TP**	**PM10**	**PM25**	**HAP**	**Methanol**	**Data Source/Comments**
Total Site Potential to emit in tons per calender year										
Boiler	**2.0**	**41.1**	**23.7**	**3.2**	**2.2**	**2.2**	**2.2**	**0.0**		**AP-42 Section 1.5 (HD-5 LPG)**
Kiln				**213.1**	**7.8**	**7.8**		**25.5**	**18.6**	**USEPA Region X EF**
Mill				**16.37**	**19.1**	**16.2**	**9.50**	**0.61**	**0.61**	
Misc. Non-fugitive Activities					**26.1**	**13.1**	**6.53**			
Misc. Fugitive Activities					26.8	13.4	6.70			
Fugitive Dust					137.7	137.7				
Total	**2.0**	**41.1**	**23.7**	**232.7**	**219.8**	**190.4**	**24.9**	**26.1**	**19.2**	
Total Point Source	**2.0**	**41.1**	**23.7**	**232.7**	**55.2**	**39.2**	**18.2**	**26.1**	**19.2**	

Notes:
1. Boldface values are point sources.
2. All emission factors form existing Title V permit unless otherwise noted on detail worksheets.

Table 2
Yakama Forest Products
Boiler Emissions Calculations - PTE

LPG
ASTM D 1835 Special Duty (HD-5)

Boiler Input Data — **Data for Actual Emissions Calcuation**

Paramter	Units	SLM Boiler 1	SLM Boiler 2	Total 1 & 2	LLM Boiler 3	LLM Boiler 4	Total 3 & 4
Use Factor					100%	100%	
Size	MMBTU/hr				33	33	
Fuel					LPG	LPG	
	Sulfur (ppmw)				123	123	
	Sulfur (gr/100 ft3)				6.5	6.5	
	#/gallon	Not in Operation	Not in Operation		4.240	4.240	
	gph				360.7	360.7	
	BTU/#				21,580	21,580	
	gal/yr				3,159,344	3,159,344	6,318,689
Fuel Heat Value	Mbtu/gal				91.5	91.5	
Annual Heat Load	Mmbtu/yr				289,080	289,080	578,160
Annual Op	hrs/yr				8,760	8,760	

Actual Emissions

	Pollutants						
Condition	**SO2**	**NOx**	**CO**	**VOC**	**TP**	**PM10**	**PM25**
Large Boilers (Boilers 3 and 4 combined)							
AP-42 Factor (Section 1.5)							
Calc'd Factors	0.1						
(#/1000 gallons)	0.65	13	7.5	1	0.7	0.7	0.7
Emissions (#/yr)	4,080	82,143	47,390	6,319	4,423	4,423	4,423
Value Used (tpy)	**2.04**	**41.1**	**23.7**	**3.2**	**2.2**	**2.2**	**2.2**
Total Emissions	**2.04**	**41.1**	**23.7**	**3.2**	**2.2**	**2.2**	**2.2**

Notes:
1. No HAPS listed as actual emissions because of no propane HAP emission factors.

Table 3
Yakama Forest Products
Kiln Emissions Calculations - PTE

Maximum Production

Log Species	Small Log mbf/yr	Large Log mbf/yr	Total mbf/yr
Grand Fir	Out of Service	116,527	116,527
Douglas Fir		116,393	116,393
Total Fir		232,920	232,920
Pine		77,184	77,184

		Pollutant								
		Criteria			HAPS					
Component		**PM**	**PM10**	**VOC**	**Total**	Methanol	Formaldehyde	Acetaldehyde	Propionaldehyde	Acrolein
Equation Parameters (aT-b = EF)										
Grand Fir	a			0.00817		0.00465	0.00016			
	b			1.02133		0.7336	0.02764			
Douglas Fir	a			0.0146		0.00114	0.000028			
	b			1.7713		0.1609	0.0038			
Ponderosa Pine	a			0.02083		0.00137	0.000074			
	b			1.30029		0.18979	0.010457			
Emission Factor (#/MBF)										
	Temp oF									
Grand Fir	200	0.05	0.05	0.61267	0.25656	0.1964	0.00436	0.055	0.0003	0.0005
Douglas Fir	200	0.05	0.05	1.1487	0.0972	0.0671	0.0018	0.0275	0.0003	0.0005
Ponderosa Pine	200	0.05	0.05	2.86571	0.126153	0.08421	0.004343	0.034	0.001	0.0026
PTE Emissions (ton/yr)										
Small Log		Out of Service								
Kilns 1 - 7		7.75	7.75	213.1	25.5	18.6	0.526	6.1	0.074	0.159
Total Kiln		7.75	7.75	213.1	25.5	18.6	0.526	6.1	0.074	0.159

Notes:
1. Emission factors (PM) from OREGON DEQ AQ-EF02
2. Emission factors (VOC & HAP) from USEPA Region X (Nov 2019).

Species	WPP1 VOC[1,2] (lb/mbf)	Methanol[2] (lb/mbf)	Formaldehyde[2] (lb/mbf)	Acetaldehyde (lb/mbf)	Propionaldehyde (lb/mbf)	Acrolein (lb/mbf)
Non-Resinous Softwood Species						
Western True Firs[3]	0.00817x - 1.02133	0.00465x - 0.73360	0.00016x - 0.02764	0.0550	no data	no data
Western Hemlock	0.00369x - 0.39197	0.00249x - 0.39750	0.000046x - 0.007622	0.0677	0.0004	0.0012
Western Red Cedar	0.00817x - 1.02133	0.00465x - 0.73360	0.00016x - 0.02764	0.0677	0.0004	0.0012
Resinous Softwood Species (Non-Pine Family)						
Douglas Fir	0.01460x - 1.77130	0.00114x - 0.16090	0.000028x - 0.003800	0.0275	0.0003	0.0005
Engelmann Spruce	0.1769	0.00088x - 0.13526	0.000042x - 0.006529	0.0201	0.0002	0.0005
Larch	0.01460x - 1.77130	0.00114x - 0.16090	0.000028x - 0.003800	0.0275	0.0003	0.0005
Resinous Softwood Species (Pine Family)						
Lodgepole Pine	1.1352	0.0550	0.0030	no data	no data	no data
Ponderosa Pine	0.02083x - 1.30029	0.00137x - 0.18979	0.000074x - 0.010457	0.0340	0.0010	0.0026
Western White Pine	0.02083x - 1.30029	0.00137x - 0.18979	0.000074x - 0.010457	0.0340	0.0010	0.0026

Table 4
Yakama Forest Products
Mill Emissions Calculations - Summary
Potential to Emit

Loadings Summary

Component	Units	Smalll Log Mill				Large Log Mill				Total
		Grand Fir	Douglas Fir	Pine	Max	Grand Fir	Douglas Fir	Pine	Max	
% Hog Fuel	bdtpy	25,577	24,264	15,521	25,577	21,826	30,070	11,131	30,070	55,646
% Green Chips	bdtpy	70,102	52,268	62,171	70,102	39,186	38,033	30,986	39,186	109,288
% Dry Chips	bdtpy	5,086	4,626	3,550	5,086	6,674	6,409	4,430	6,674	11,760
% Sawdust	bdtpy	11,633	8,957	10,890	11,633	6,684	7,987	13,178	13,178	24,811
% Shavings	bdtpy	8,226	7,467	5,731	8,226	11,653	11,369	15,344	15,344	23,570

Emissions Summary

Parameter	Units	Cyclones				Bins										Mill Total
		C-1	C-2	C-3	C-4	HF1	HF2	SD1	SD2	GC1	GC2	DC1	DC2	SH1	SH2	
		SLM	LLM	LLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	
		Shavings	Sawdust	Green Chips	Shavings	Hog Fuel		Sawdust		Green Chips		Dry Chips		Shavings		
PM	tpy	2.06	3.29	9.80	3.84	0.0192	0.0226	0.0087	0.0049	0.0526	0.0147	0.0076	0.0100	0.0062	0.0115	19.14
PM10	tpy	1.75	2.80	8.33	3.26	0.0090	0.0105	0.0041	0.0023	0.0245	0.0069	0.0036	0.0047	0.0029	0.0054	16.21
PM25	tpy	1.03	1.65	4.90	1.92	0.0013	0.0015	0.0006	0.0003	0.0035	0.0010	0.0005	0.0007	0.0004	0.0008	9.50
VOC	tpy	1.44	3.31	7.77	3.85											16.37
Methanol	tpy	0.07	0.11	0.31	0.12											0.61

Table 5
Yakama Forest Products
Cyclone Emissions

PTE

Parameter	**Units**	**Cyclones**			
Source ID		C-1	C-2	C-3	C-4
Location		SLM	LLM	LLM	LLM
Material		Shavings	Sawdust	Green Chips	Shavings
Loadings					
Grand Fir	bdtpy	8,226	6,684	39,186	11,653
Douglas Fir	bdtpy	7,467	7,987	38,033	11,369
Pine	bdtpy	5,731	13,178	30,986	15,344
Max	bdtpy	8,226	13,178	39,186	15,344
Emission Factors					
PM	#/bdt	0.50	0.50	0.50	0.50
PM10	#/bdt	0.43	0.43	0.43	0.43
PM25	#/bdt	0.25	0.25	0.25	0.25
VOC					
Grand Fir	#/bdt	0.2692	0.2386	0.0734	0.2692
Douglas Fir	#/bdt	0.2692	0.2386	0.0734	0.2692
Pine	#/bdt	0.5017	0.5017	0.5017	0.5017
Methanol	#/bdt	0.016	0.016	0.016	0.016
Emissions					
PM	t/yr	2.1	3.3	9.8	3.8
PM10	t/yr	1.7	2.8	8.3	3.3
PM25	t/yr	1.0	1.6	4.9	1.9
VOC	t/yr	1.4	3.3	7.8	3.8
Methanol	t/yr	0.066	0.105	0.313	0.123

Table 6
Yakama Forest Products
Bin Emissions

PTE

Parameter	Units	Bins									
Source ID		HF1	HF2	SD1	SD2	GC1	GC2	DC1	DC2	SH1	SH2
Location		SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM
Material		Hog Fuel		Sawdust		Green Chips		Dry Chips		Shavings	
Loadings	bdtpy	25,577	30,070	11,633	13,178	70,102	39,186	5,086	6,674	8,226	15,344
Emission Factors											
Filling											
PM	#/bdt	0.00075	0.00075	0.00075	Cyclone C-2	0.00075	Cyclone C-3	0.0015	0.0015	Cyclone C-1	Cyclone C-4
PM10	#/bdt	0.00035	0.00035	0.00035		0.00035		0.0007	0.0007		
PM25	#/bdt	0.00005	0.00005	0.00005		0.00005		0.0001	0.0001		
Truck Loading											
PM	#/bdt	0.00075	0.00075	0.00075	0.00075	0.00075	0.00075	0.0015	0.0015	0.0015	0.0015
PM10	#/bdt	0.00035	0.00035	0.00035	0.00035	0.00035	0.00035	0.0007	0.0007	0.0007	0.0007
PM25	#/bdt	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.0001	0.0001	0.0001
Emissions											
Filling											
PM	tpy	0.0096	0.0113	0.0044	Cyclone C-2	0.0263	Cyclone C-3	0.0038	0.0050	Cyclone C-1	Cyclone C-4
PM10	tpy	0.0045	0.0053	0.0020		0.0123		0.0018	0.0023		
PM25	tpy	0.0006	0.0008	0.0003		0.0018		0.0003	0.0003		
Truck Loading											
PM	tpy	0.0096	0.0113	0.0044	0.0049	0.0263	0.0147	0.0038	0.0050	0.0062	0.0115
PM10	tpy	0.0045	0.0053	0.0020	0.0023	0.0123	0.0069	0.0018	0.0023	0.0029	0.0054
PM25	tpy	0.0006	0.0008	0.0003	0.0003	0.0018	0.0010	0.0003	0.0003	0.0004	0.0008
Total											
PM	tpy	0.0192	0.0226	0.0087	0.0049	0.0526	0.0147	0.0076	0.0100	0.0062	0.0115
PM10	tpy	0.0090	0.0105	0.0041	0.0023	0.0245	0.0069	0.0036	0.0047	0.0029	0.0054
PM25	tpy	0.0013	0.0015	0.0006	0.0003	0.0035	0.0010	0.0005	0.0007	0.0004	0.0008

Table 7
Yakama Forest Products
Miscellaneious Non-fugitive Activities

PTE

Parameter	Units	Sawing Inside Buildings		Total
Location		SLM	LLM	
Loadings	tpy Logs	322,709	423,400	746,109
Emission Factors				
PM	#/tpy logs	0.35	0.35	
PM10	#/tpy logs	0.175	0.175	
PM25	#/tpy logs	0.0875	0.0875	
Control Efficiency		80%	80%	
Emissions				
PM	t/yr	11.3	14.8	26.1
PM10	t/yr	5.6	7.4	13.1
PM25	t/yr	2.8	3.7	6.5

Note:
1. All emissions factors from Title V Permit

Table 8
Yakama Forest Products
Miscellaneious Fugitive Activities

PTE

Parameter	Units	Sawing		Debarking		Hog Fuel Handling: Conveyance to		Hog		Conveyance from		Wind Erosion		Total
Location		SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	SLM	LLM	
Loadings	tpy Logs	322,709	423,400	322,709	423,400									
	bdt/yr					25,577	30,070	25,577	30,070	25,577	30,070			
	Acres											17	7	
Emission Factors														
PM	#/*	0.035	0.035	0.035	0.035	0.00075	0.00075	0.024	0.024	0.00075	0.00075	0.38	0.38	
PM10	#/*	0.0175	0.0175	0.0175	0.0175	0.00035	0.00035	0.012	0.012	0.00035	0.00035	0.190	0.190	
PM25	#/*	0.00875	0.00875	0.00875	0.00875	0.00005	0.00005	0.0060	0.0060	0.00005	0.00005	0.0950	0.0950	
Control Efficiency		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Emissions														
PM	t/yr	5.6	7.4	5.6	7.4	0.0096	0.0113	0.3069	0.3608	0.0096	0.0113	0.0032	0.0013	26.8
PM10	t/yr	2.8	3.7	2.8	3.7	0.0045	0.0053	0.1535	0.1804	0.0045	0.0053	0.0016	0.0007	13.4
PM25	t/yr	1.4	1.9	1.4	1.9	0.0006	0.0008	0.0767	0.0902	0.0006	0.0008	0.0008	0.0003	6.7

Table 9
Yakama Forest Products
Fugitive Dust Emissions Calculations

Paved EF Values		
Particle Size (PM10)	0.016	#/VMT
Silt Loading	7.4	gm/m2

Unpaved EF Values			
Particle Size	2.6	#/VMT	
Silt Content	8.4	%	
Surface Moisture	0.2	%	
Precip Days	200	Days	(Site is watered down 130 days per year)

Employee Vehicles and Product Pickup/Delivery (All paved roads)

Vehicle	Weight (pounds)	veh/d	Days/yr	Trips/yr	Dist/RT (ft)	VMT/yr	EF (#/VMT)	PM10 (ton/yr)
Employee Vehicles	5,000	60	340	20,400	1,200	4,636	0.0285	0.07
Product Loadout	60,000	48	340	16,320	1,200	3,709	1.1843	2.20
							Total PM10	**2.26**

Yard Equipment Inventory

Vehicle	Location	Maximum Hours Per Day	Maximum Hours Per year	Average Hours per year (0.75)	Maximum Vehicle Speed (mph)	Average Vehicle Speed (mph) (0.5)	Maximum Gross Vehicle Weight (pounds)	Vehicle Empty Weight (pounds) (0.5)	Average Gross Weight Laden (pounds) (0.5)	% Paved	% Unpaved	Annual VMT	VMT Paved	VMT Unpaved	Hours Unpaved
Forklifts															
H-360 HD	SM-3	18	4,320	3,240	4	2	41,200	20,600	30,900	100%	0%	6480	6480	0	0
H-360 HD	PM-3	12	2,880	2,160	4	2	41,200	20,600	30,900	100%	0%	4320	4320	0	0
H-360 HD	PM/KILN-3	16	3,840	2,880	4	2	41,200	20,600	30,900	100%	0%	5760	5760	0	0
H-360 HD	KILN-	16	3,840	2,880	4	2	41,200	20,600	30,900	100%	0%	5760	5760	0	0
H-280	SM-2	9	2,160	1,620	4	2	34,800	17,400	26,100	100%	0%	3240	3240	0	0
H-280	PM-2	9	2,160	1,620	4	2	34,800	17,400	26,100	100%	0%	3240	3240	0	0
H-190 HD	SHIPPING-3	12	2,880	2,160	4	2	26,300	13,150	19,725	100%	0%	4320	4320	0	0
H-190 HD	SHIPPING-3	12	2,880	2,160	4	2	26,300	13,150	19,725	100%	0%	4320	4320	0	0
H-190 HD	SHIPPING-3	12	2,880	2,160	4	2	26,300	13,150	19,725	100%	0%	4320	4320	0	0
H-190 HD	PM-3	11	2,640	1,980	4	2	26,300	13,150	19,725	100%	0%	3960	3960	0	0
H-190 HD	PM-3	11	2,640	1,980	4	2	26,300	13,150	19,725	100%	0%	3960	3960	0	0
H-190	PM-2	9	2,160	1,620	3	2	26,300	13,150	19,725	100%	0%	2430	2430	0	0
H-190	PM/SHIP-2	10	2,400	1,800	3	2	26,300	13,150	19,725	100%	0%	2700	2700	0	0
H-190	SHIPPING-2	11	2,640	1,980	3	2	26,300	13,150	19,725	100%	0%	2970	2970	0	0
H-155	SM-2	2	480	360	2	1	13,500	6,750	10,125	100%	0%	360	360	0	0
LULL	SM-2	1	240	180	2	1	9,000	4,500	6,750	90%	10%	180	162	18	18
TRACTOR	SM-2	3	720	540	1	1	7,500	3,750	5,625	90%	10%	270	243	27	54
Yard Equipment															
CAT 950	MERCH	9	2,160	1,620	6	3	42,520	21,260	31,890	99%	1%	4860	4,811	49	16.2
CAT 950	MERCH	9	2,160	1,620	6	3	42,520	21,260	31,890	99%	1%	4860	4,811	49	16.2
CAT 950	MERCH	9	2,160	1,620	6	3	42,520	21,260	31,890	99%	1%	4860	4,811	49	16.2
JD-200	MERCH	9	2,160	1,620	1	1	50,000	25,000	37,500	99%	1%	810	802	8	16.2
LETRO	P-2	9	2,160	1,620	3	2	90,000	45,000	67,500	1%	99%	2430	24	2,406	1603.8
LETRO	P-2	9	2,160	1,620	3	2	90,000	45,000	67,500	15%	85%	2430	365	2,066	1377
LETRO	P-3	18	4,320	3,240	5	3	140,000	70,000	105,000	99%	1%	8100	8,019	81	32.4
LETRO	P-3	9	1,800	1,350	5	3	140,000	70,000	105,000	99%	1%	3375	3,341	34	13.5
JD-744	P-2	9	1,800	1,350	3	2	51,920	25,960	38,940	1%	99%	2025	20	2,005	1336.5
JD-744	P-2	9	1,800	1,350	3	2	51,920	25,960	38,940	1%	99%	2025	20	2,005	1336.5
CAT 966	P-2	9	1,800	1,350	3	2	51,980	25,990	38,985	1%	99%	2025	20	2,005	1336.5
CAT 966	P-3	9	1,800	1,350	7	4	52,720	26,360	39,540	99%	1%	4725	4,678	47	13.5
CAT 966	P-3	9	1,800	1,350	7	4	52,720	26,360	39,540	99%	1%	4725	4,678	47	13.5
HITACHI	P-2	9	1,800	1,350	1	1	81,000	40,500	60,750	99%	1%	675	668	7	13.5
HITACHI	P-2	9	1,800	1,350	1	1	81,000	40,500	60,750	1%	99%	675	7	668	1336.5
MADILL	P-3	9	1,800	1,350	1	1	99,800	49,900	74,850	99%	1%	675	668	7	13.5
MADILL	P-3	9	1,800	1,350	1	1	99,800	49,900	74,850	1%	99%	675	7	668	1336.5
WATER 1	P-2&3	8	1,040	780	10	5	49,860	24,930	37,395	50%	50%	3900	1,950	1,950	390
WATER 2	P-2&3	8	1,040	780	10	5	52,180	26,090	39,135	50%	50%	3900	1,950	1,950	390
WATER 3	P-2&3	8	1,040	780	10	5	51,920	25,960	38,940	50%	50%	3900	1,950	1,950	390
						Averages	51,059	25,529	38,294		Totals	120,240	102,146	18,094	11,070
						Average Vehicle Weight -->			31,912			Average Unpaved Speed -->			1.63

Notes:
1. Emission Factors from AP-42 Section 13.2

$$EF_{Paved} = k\left(\frac{S_L}{2}\right)^{0.65}\left(\frac{W}{3}\right)^{1.5}$$

$$EF_{Unpaved} = k\left(\frac{\left(\frac{s}{12}\right)^{0.8}\left(\frac{W}{3}\right)^{0.4}}{\left(\frac{M}{0.2}\right)^{0.3}}\right)\frac{S}{15}\frac{(365-P)}{365}$$

where k = PM10 multiplier (#/yr), SL = Paved road silt loading (gm/m2),
W = vehicle weight (tons), s = surface material silt content (%), M = soil moisure (%)
S = speed (mph), and P = number of days of measurable precipitation.

Yard Emission Factor Calculation

Variable	Units	Paved	Unpaved
k	#/VMT	0.016	2.6
SL	gm/m2	7.4	
W	tons	15.96	15.96
s	%		8.4
S	mph		1.63
M	%		0.2
P	Days		200
EF	#/VMT	0.46	0.64
Total miles	miles	120,240	102,146
Emisisons	pounds	55,233	65,542

Total Fugitve Dust Emissions		
Yard Paved	55,233	Pounds
Yard Unpaved	65,542	Pounds
Employees	0.07	Pounds
Trucks	2.20	Pounds
Total	120,777	Pounds
	60.39	**tons**

Total Fugtive Dust Emissions		
Paved	55,236	Pounds
	27.62	Tons
Unpaved	65,542	Pounds
	32.77	Tons
Total	120,777	Pounds
	60.39	**Tons**

Actual Emissions

			ProRated Value	
Lumber Production (mbf/yr)	Baseline	135,988	9.15	Paved
	Actual	45,076	10.86	Unpaved
	ProRate	33%	**20.02 Tons**	Total

PTE

			ProRated Value	
Lumber Production (mbf/yr)	Baseline	135,988		
	PTE	310,104	62.98	Paved
	ProRate	228%	74.73	Unpaved
			137.71 Tons	Total