



**Draft Permit Renewal-
Weyerhaeuser NR Company
Raymond Lumbermill
TECHNICAL SUPPORT DOCUMENT**
Olympic Region Clean Air Agency
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ISSUED IN ACCORDANCE WITH:
Chapter 70.94 RCW and Chapter 173-401 WAC

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PERMITTEE & MAILING ADDRESS:	Weyerhaeuser NR Company Raymond Lumbermill 51 Ellis St Raymond, WA 98577
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FACILITY DESCRIPTION:	Lumber Manufacturer
ORCAA File #:	475
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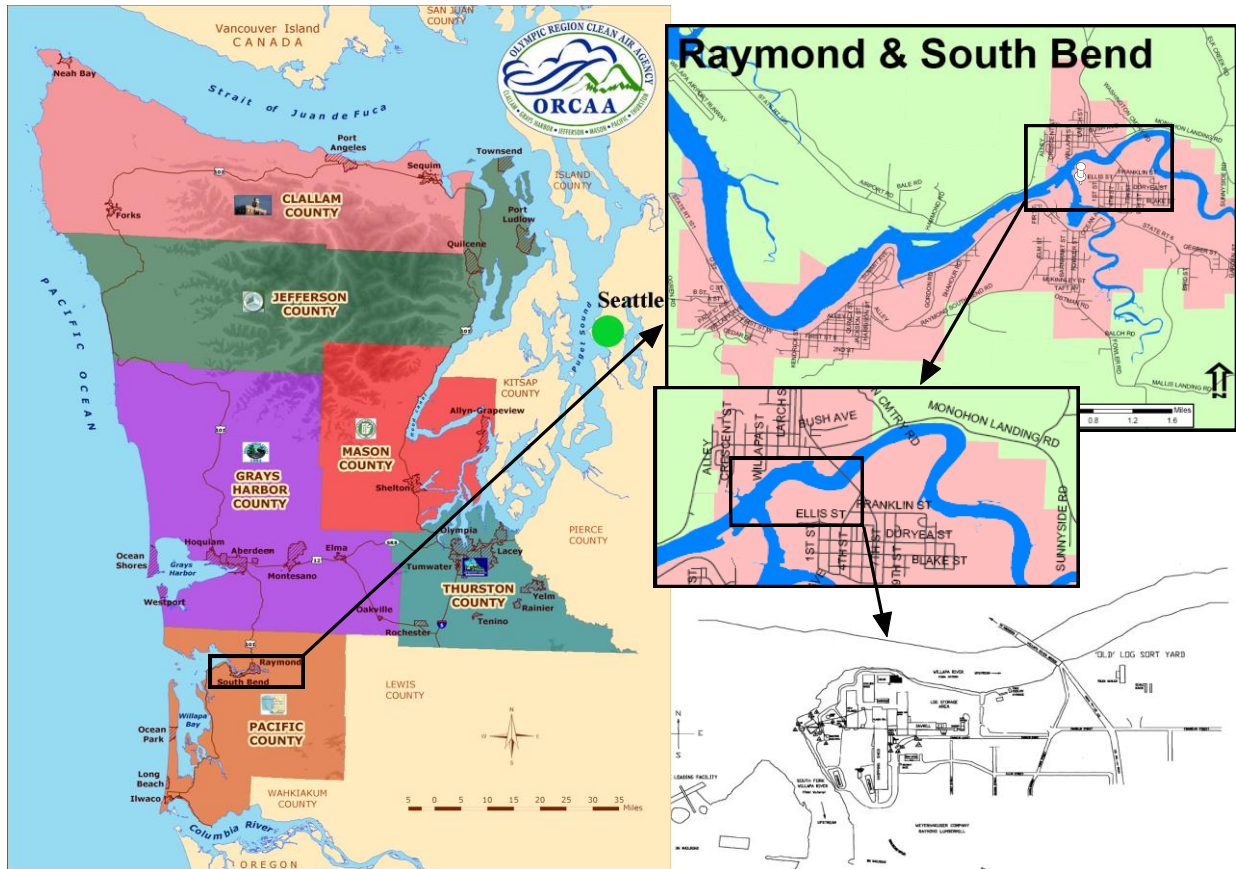
1.0 Disclaimer

This Technical Support Document (TSD) describes the history, equipment and operations at Weyerhaeuser NR Company Raymond Lumbermill (WEYERHAEUSER) relevant to determining applicable air quality regulations and requirements. The information contained in this TSD is for purposes of background information only and is not directly enforceable. Air-related requirements pursuant to both the Federal Clean Air Act (FCAA) and Washington's Clean Air Act (WACAA) are contained in WEYERHAEUSER's AOP and include emissions limits and associated monitoring, record keeping, and reporting requirements. All terms and conditions in WEYERHAEUSER's AOP are enforceable.

2.0 Facility Description

WEYERHAEUSER operates a softwood lumbermill in Raymond, Washington. The lumber mill is located at the end of Ellis Street, due West of the US 101 bridge over the Willapa River. Figure 2.1 shows the location of WEYERHAEUSER.

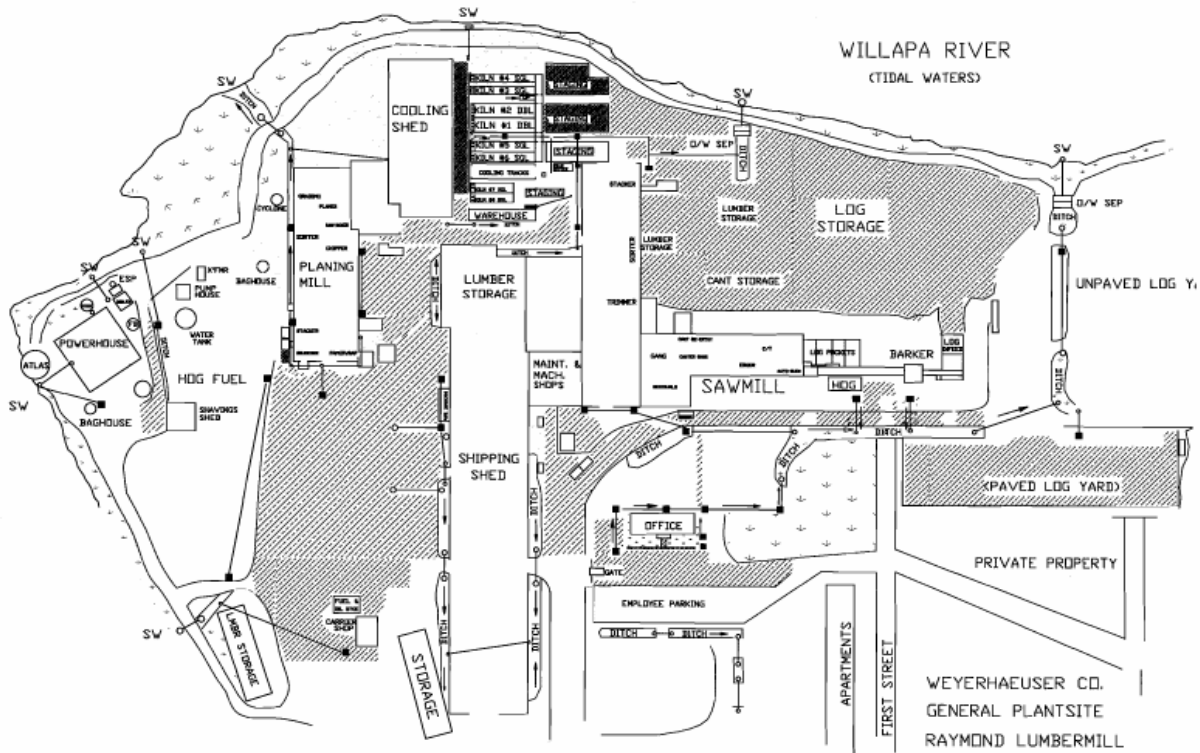
Figure 2.1 – Location of Weyerhaeuser NR Company Raymond Lumbermill



WEYERHAEUSER produces kiln dried lumber and several other products from wood residuals generated in the milling process such as wood chips, sawdust and planer shavings. For purposes of describing the mill and defining emission units in the AOP, operations and equipment are grouped

in the following categories: lumber mill operations; lumber drying; planing mill operations; and, powerhouse operations. Figure 2.2 shows the layout of WEYERHAEUSER.

Figure 2.2 – General Site Layout of Weyerhaeuser Company NR Raymond



The Lumber mill

In the lumber mill, raw logs are delivered by truck and are unloaded using a log stacker. The raw logs are either sent directly to the sawmill or stored in the log storage yard for future use. Logs begin the milling process at the log deck, where they are transferred first to the cutoff saw for removal of unwanted fiber and then to the debarker for bark removal. The removed bark is transferred by conveyor to the hog, where it is ground into fuel and then pneumatically blown to the fuel storage pile near the powerhouse. Alternatively, there is a by-pass chute that diverts bark to a re-entry pile if the hog is experiencing down time. From the debarker, the logs are sent either to the bucking operation to be cut into specified lengths or directly to the log sort pockets before entering the primary breakdown unit. The primary breakdown unit makes cants and sideboards from the log segments. The sideboards are processed through an edger while the cants are processed through a gang saw to make rough green lumber. Trimmings from the edging operation are sent to a chipper. The rough green lumber then is processed through a trimmer to cut the lumber to desired lengths and remove any defects. From the trimmer the lumber is sent to a sorter, where it is separated according to length and width, and then to a stacker, where it is arranged into packages to be dried at the kilns.

Wood residuals such as sawdust and chips are transferred by conveyors to an indoor screening process and then to outside storage bins. From there, they are loaded into trucks and transferred to points of sale. Periodically, operations require that sawdust be sent outside to an uncovered storage bunk. This sawdust is eventually transferred to the powerhouse fuel pile to be used as boiler fuel.

Lumber Drying

Rough green lumber is transported by fork lifts from the sawmill to the dry kiln staging area where the packages are stacked onto kiln cars before being pushed on tracks into the kiln for drying. The kilns use indirect steam heat for drying the lumber. A lumber “conditioning” process uses steam and water mist. All steam used in the drying process is generated at the wood residual-fired boiler at the powerhouse. After the lumber is dried, it is removed from the kilns and stored on tracks in a cooling shed until it is taken to the planing mill for further processing.

Planing Mill

Rough dried lumber is delivered to the planer where it is surfaced to specified sizes. This process generates shavings that are used as fuel. The surfaced lumber moves through a series of grading tables where it is graded for quality and is then sent to a trimmer for removal of defects. Defect trim pieces are transferred by conveyor to a chipper. From the chipper, the chips are sent to a screen to separate chip sizes. Proper sized chips are blown pneumatically to the hog fuel storage pile where they are mixed with the hog fuel and burned in the boiler as fuel. Oversized chips are sent back to the chipper where they go through a repeat process.

Trimmed and graded lumber is sent to a sorter for separation by length and grade. The finished lumber is sent to a stacker and then to a strapper/paperwrap section where it is packaged for shipment. Forklifts remove the completed packages and store them for shipment either indoors or outdoors depending on the grade of the lumber.

Steam Production

WEYERHAEUSER operates a Wellons hog fuel boiler that has a rated capacity of 80 thousand pounds per hour of saturated steam. Most of the wood residuals used for fuel by the boiler are generated from the sawmill’s debarking process. Residual bark passes through a hogging operation before being pneumatically blown to the powerhouse storage bin or to the wood residual pile. Hog fuel from de-barking operations is supplemented with residuals from milling and planing operations as well as purchased wood fuel from outside sources. This purchased fuel is trucked in to the fuel pile and dumped. Mobile equipment moves or feeds the fuel into a conveyor leading to the storage bin. Fuel from the storage bin is transferred by conveyor to a metering bin where it is mixed with shavings. The boiler infrequently burns oily wood residuals and booms along with the regular wood residual fuel.

Hot gases from the burning process pass to a boiler where steam is generated for the dry kilns. Particulate and gases from the boiler operation pass through a multiclone and then through an electrostatic precipitator for removal of particulate prior to discharge to the atmosphere through a stack.

Various cyclones are used for handling materials that are used as fuel for steam production in the powerhouse. Cyclones associated with fuel delivery to the powerhouse include cyclone #15 (not currently in use, shavings building cyclone), #7 (Wellons bin cyclone, not currently in use), #11 (hog

fuel pile cyclone), #21 (cyclone separating powerhouse baghouse catch), and cyclone #8 (cyclone separating Wellons bin material, not currently in use). Out of all these cyclones, only #11 emits directly to the atmosphere. Emissions from #7, #8, #15 and #21 go to the powerhouse baghouse for control before exhausting to the atmosphere. Therefore, the powerhouse baghouse serves as the control device for these cyclones. The solid material catch from the powerhouse baghouse located on the storage bins, metering bins, and the shavings storage building, are attached to a system that collects dust at a baghouse located near the powerhouse. The baghouse filter bags are changed and laundered as needed. A replacement set of bags is always ready for the change-out process.

Maintenance Activities

Maintenance activities are performed as needed at the various process areas. Saw and knife sharpening for the sawmilling operations are performed at a filing room at the sawmill. Knife sharpening is conducted at the grinding room at the planing mill. Exhaust from these processes are confined to the filing room operating area.

A maintenance and machine shop provides facilities for milling operations and has wood and metal construction work areas as well. A small lumber mill vehicle maintenance shop provides facilities for the repair of log stacking equipment, forklifts, and small vehicles. The facility has diesel storage on-site.

Miscellaneous Activities

Miscellaneous emissions at the facility encompass a wide range of units and activities, including but not limited to air compressors, rough and finished lumber storage, loading/unloading of trucks, office activities, and various paved and unpaved roads and parking lots.

3.0 Emission Unit Descriptions

WEYERHAEUSER's lumber mill consists of several insignificant emissions units and five significant emissions units: a two-cell hog fuel boiler, lumber dry kilns, a planer mill and associated dust collection system, a sawmill, and a hog fuel system.

As a result of drying lumber in kilns (EU2), the mill is a major source of volatile organic compounds (VOC), as well as the hazardous air pollutants (HAP) methanol and acetaldehyde. As a result of the hog fuel boiler, the mill is a major source of carbon monoxide (CO) and oxides of nitrogen (NO_x). The mill is also a minor source of the criteria pollutants particulate matter less than 10 microns diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), and other HAPs. The mill also emits toxic air pollutants (TAPs). Combustion in the hog fuel boiler results in the emission of the greenhouse gases carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), which are implicated in global climate change.

Emission unit designations and associated NOCs are shown in Table 3.0.

Table 3.0 - Emission Unit Summary

Emission Unit #	Equipment ID	Description	NOC
EU1 Boiler	Wellons hog fuel boiler	<ul style="list-style-type: none"> Wellons dual cell furnace. 80,000 lbs/hr rated saturated steam 115 MMBtu/hr design heat rate Controls include multiclone followed by 2 field ESP. 	95NOC646 94NOC589
EU2 Kilns	Dry Kiln #1	<ul style="list-style-type: none"> 48 MMBf/yr design capacity 104' x 34' x 27' (ht), double track 	97NOC025
	Dry Kiln #2	<ul style="list-style-type: none"> 48 MMBf/yr design capacity 104' x 34' x 27' (ht), double track 	97NOC025
	Dry Kiln #3	<ul style="list-style-type: none"> 24 MMBf/yr design capacity 104' x 34' x 27' (ht), single track shares common wall with #4 	94NOC570
	Dry Kiln #4	<ul style="list-style-type: none"> 24 MMBf/yr design capacity 104' x 34' x 27' (ht), single track shares common wall with #3 	94NOC570
	Dry Kilns #5 - #6 identical units	<ul style="list-style-type: none"> 24 MMBf/yr design capacity 104' x 34' x 27' (ht), single tracks 	95NOC646/ 95NOC647
	Dry Kilns #7 - #8	<ul style="list-style-type: none"> 13 MMBf /yr design capacity each Single track Single track kilns with common wall between 68' x 34' x 27' (ht) 	97NOC025
EU3 Planer Mill	Cyclone #5	<ul style="list-style-type: none"> Clarke Pneu-Aire, 65,000 acfm Catch to cyclone #6 or cyclone #7 Exhaust to planer mill #1 (Clarke) baghouse Alternatively, may exhaust to atmosphere when #1 baghouse is malfunctioning. There are indicators by way of a reader board in the sawmill and planer. 	95NOC553 95NOC554
	Cyclone #6 (shavings bin)	<ul style="list-style-type: none"> Shavings bin cyclone Grandfathered unit (no NOC) Processes catch from cyclone #5 Exhausts to the Carter day baghouse (#2) Catch empties into shavings truck bin 	none
	Planer Chip Truck Bin (dual bin)	<ul style="list-style-type: none"> Planer chips blown to chip truck bin target box. Exhausts directly to atm. 	none
	“Green” Planer Shavings Truck Bin	<ul style="list-style-type: none"> Green planer shavings blown to knock-out box above truck bin. Grandfathered unit (no NOC) 	none

Table 3.0 - Emission Unit Summary

Emission Unit #	Equipment ID	Description	NOC
	Baghouse #1 (Clarke baghouse)	<ul style="list-style-type: none"> Clarke baghouse, Model 40-20 65,000 acfm 100 x 20' bags Reverse air cleaning system Pressure drop 1- 3.5 inches water Processes exhaust from cyclone #5 Catch to baghouse #2 Carter Day baghouse. Emergency abort gate bypasses unit and exhausts directly to atm. 	95NOC553
	Baghouse #2 (Carter Day baghouse)	<ul style="list-style-type: none"> Carter Day, Model 144RJ120 38,250 acfm Reverse air Pressure drop 0.5- 5.0 inches water Processes catch from baghouse #1, exhaust from cyclone #6 and emissions from planing mill. emergency abort gate bypasses unit and exhausts directly to atm. There are indicators by way of a reader board in the sawmill and planer. 	96NOC031
	Baghouse #3 (Package Saw Shaker baghouse)	<ul style="list-style-type: none"> Superior Systems, Model MRM-12 Operating air flow: 3500 acfm Pressure drop: 0.5-4.5" water 15HP fan Filter material: 12 oz shaker felt Control efficiency: 99.9% 	98NOC009
EU4 Sawmill	Sawmill Baghouse (Superior Systems)	<ul style="list-style-type: none"> Superior Systems, Model 12-138-12 44,793 acfm Purged air Pressure drop "about 2" per NOC application; 0.5 -4.0 inches water column Emergency abort system shuts down sawmill dust collection during baghouse malfunctions. 	98NOC004
	Band Saw Filing Room Baghouse	<ul style="list-style-type: none"> Exhausts Indoors (no outdoor emissions; exempt unit, included for informational purposes) Controls emissions from metal filings in the filing room 	None
	Sawdust Truck Bin	Fugitive dust emissions during truck loading	None
	Dual Chip Bin	Fugitive dust emissions during truck loading	None

Table 3.0 - Emission Unit Summary

Emission Unit #	Equipment ID	Description	NOC
EU5 Hog Fuel System	Powerhouse Baghouse	Controls emissions from cyclones 2, 7, 8, 15, and 21 <ul style="list-style-type: none"> • Clarke baghouse Model# 40-20 • 15,590 acfm • Reverse air cleaning system • Pressure drop 0.75 - 3.5 inches water • Effective cloth area of 2668 ft² • Forty (40) @ 10 oz. Polypropylene felt bags 	06NOC467
	Cyclone #2 (not currently in use)	<ul style="list-style-type: none"> • Attached to Atlas bin • Exhausts to Powerhouse Baghouse • Not currently in use 	1975 NOC approval
	Cyclone #7 (The Wellons Bin Cyclone is out of use ever since the Wellons bin fire)	<ul style="list-style-type: none"> • Wellons Bin Cyclone • Make: unknown, Mod#: unknown • Processes residuals from the planing mill • Catch goes to Wellons bin • Exhaust goes to powerhouse baghouse 	1975 NOC approval
	Cyclone #8 (Planer cyclone, Out of use)	<ul style="list-style-type: none"> • Make: unknown, Mod#: unknown • Processes residuals stored in Wellons bin which is pneumatically transported to cyclone #8. • Catch goes to the wet fuel belt • Exhaust goes to the powerhouse baghouse 	1975 NOC approval
	Cyclone #11 (Hog Fuel Pile Cyclone)	<ul style="list-style-type: none"> • Hog Fuel Pile Cyclone • Make: Western Pneumatics, Inc., • 8,564 acfm • Processes hog fuel from sawmill • Catch goes to conveyor and drops to hog fuel pile • Exhaust goes to atm. 	15NOC1130
	Cyclone #15 (Shavings Building Cyclone, out of use)	<ul style="list-style-type: none"> • Shavings Building Cyclone • Make: Suterbilt, Mod# 22x60HD, Ser# 140 • 200 H.P. • 10,907 ACFM • Exhaust goes to powerhouse baghouse 	1975 NOC approval
	Cyclone #21 (powerhouse dust cyclone)	<ul style="list-style-type: none"> • Superior Systems, Mod# SSI-SL-5 • 5150 acfm • Processes catch from powerhouse baghouse • Catch goes to wet fuel belt • Exhaust goes to powerhouse baghouse 	96NOC031

3.1 EU1: Two-Cell Hog Fuel Boiler

The Wellons boiler is designated as Emission Unit 1 (EU1). EU1 consists of a Wellons two cell hog fuel boiler system and air pollution controls including a multiclone separator followed by an electrostatic precipitator (ESP). The boiler uses a fuel cell design and is equipped with an oxygen trim system. The Wellons boiler was installed in 1996 under 95NOC646. The Wellons boiler is rated at 80 thousand pounds per hour of saturated steam at 200 psig. The maximum rated heat input of the boiler is 115 million Btu/hr.

Boiler emissions are controlled by a multiclone separator followed by a two field electrostatic precipitator. The boiler is subject to requirements under Subpart Db of 40 CFR Part 60 and the federal compliance assurance monitoring (CAM) requirements under 40 CFR Part 64 as well as general requirements under Chapter 173-400 WAC and ORCAA Regulations. In addition, the Order of Approval for the boiler contains opacity, particulate, NO_x, and CO performance limits for the boiler. For particulate emissions, Condition 3 of the Order (AR1.4) specifies a grain loading limit of 0.02 gr/dscf which is more stringent than the federal performance standard in Subpart Db (0.1 lb/MMbtu). Condition 4 of the Order (AR1.7) requires that opacity not exceed 10% for three minutes in any one hour except during periods of start-up, shutdown, or during equipment malfunctions. Condition 8 of the order (AR1.30) requires continuous opacity monitoring using an opacity monitor certified according to Performance Specification #1 in 40 CFR Part 60 (Appendix B). Limits for NO_x and CO emissions are established by Conditions 5 and 6 (AR1.11 and AR1.12) respectively.

WEYERHAEUSER complied with the initial notification requirements of 40 CFR Part 60, subpart Db. Notification of the date of construction and anticipated date of initial start-up [requirements under §60.7(a)(1)&(2)] were provided to ORCAA through WEYERHAEUSER's NOC application for the new boiler. Formal notification of the actual date of initial start-up [required by §60.49b(a)] occurred on August 5, 1996. ORCAA was notified of the date of initial compliance source testing on August 26, 1996 [required by §60.8(d)].

WEYERHAEUSER complied with the initial performance testing requirements of 40 CFR Part 60, Subpart Db. Stack testing of the hog fuel boiler emissions of particulates, CO and NO_x as well as opacity was conducted on September 18, 1996. Testing results were forwarded to ORCAA on October 11, 1996 [required by §60.49b(b)]. The initial test results confirmed compliance with Subpart Db limits for particulates and opacity, and particulate, NO_x, CO and opacity limits established in the NOC Approval Order for the new boiler. Prior to conducting the initial stack test, WEYERHAEUSER provided a performance evaluation and other information on the continuous opacity monitoring system (COMS) verifying that the COMS met the requirements of §60.48b(a) [required by §60.49b(b)].

Section §60.49b(h) in 40 CFR Part 60, Subpart Db requires WEYERHAEUSER to submit excess emission reports for any calendar quarter during which there are excess emissions or a semiannual report stating that there were no excess emissions during the period. WEYERHAEUSER has been consistent to date in complying with §60.49b(h) by submitting such reports directly to ORCAA. It is ORCAA's understanding, based on consultation with staff from EPA Region 10, that the reports required under 40 CFR Part 60, Subpart Db need only be submitted to the delegated regulatory

authority which in this case is ORCAA. As such, ORCAA considers WEYERHAEUSER to be in compliance with all Subpart Db reporting requirements to date.

Table 4.1 shows actual emissions from the mill for 2017. Actual 2017 emissions were calculated using emission factors derived from stack testing and the actual amount of steam generated during 2017.

Applicability of Compliance Assurance Monitoring Rule

Compliance assurance monitoring (CAM) requirements under 40 CFR Part 64 apply to particulate emissions from WEYERHAEUSER’s hog fuel boiler since:

1. The boiler is subject to a particulate emissions limitation;
2. The boiler relies on air pollution control devices (a multiclone and ESP) to achieve compliance with the limitation; and,
3. The pre-control particulate emissions from the boiler are greater than 100 tons per year.

CAM requirements for the boiler are met in WEYERHAEUSER’s permit through meeting the applicable requirements of the Boiler MACT (Subpart DDDDD).

The boiler’s potential to emit criteria pollutants is shown in Table 3.2. The boiler’s 100-year global warming potential is shown in Table 3.3.

Table 3.2: Wellons Hog Fuel Boiler Criteria Pollutant Potential to Emit

POLLUTANT	EMISSION FACTOR (LB/MMBTU)	EMISSION FACTOR SOURCE	POTENTIAL TO EMIT (LBS/HR)	POTENTIAL TO EMIT (TPY)
NOx	0.538 (175 ppmvd)	Permit Condition AR1.11	61.8	271
CO	0.560 (300 ppmvd)	Permit Condition AR1.12	64.4	282
SO ₂	0.025	EPA AP-42 Table 1.6-2	2.88	12.6
PM	0.02	Permit Condition AR1.4	2.31	10.1
VOC	0.017	EPA AP-42 Table 1.6-3	1.96	8.6

-Emissions calculated at permitted numerical limits, 115 MMBtu/hr and 8760 hrs/ year operation and do not reflect realistic emissions

Table 3.3: Wellons Hog Fuel Boiler 100-Year Global Warming Potential

POLLUTANT	POTENTIAL ANNUAL EMISSIONS (LBS)	100-YEAR GLOBAL WARMING POTENTIAL (CO ₂ -EQUIVALENT METRIC TONS)
CO ₂	208,000,000	115,000 (94,500)
CH ₄	8,000	220 (90.9)
N ₂ O	16,000	1,310 (2,170)
Total	-	116,000 (96,800)

-Annual CH₄ multiplied by 25 and N₂O by 298 to create CO₂e factors.

3.2 EU2: Dry Kilns

The lumber dry kilns are considered collectively as Emission Unit 2 (EU2). WEYERHAEUSER currently has a total of 8 separate lumber dry kilns. Each dry kiln is indirectly heated with steam from the powerhouse. Emissions from the kilns include volatile organic compounds (VOCs) from the wood itself consisting of methanol and acetaldehyde compounds listed in the Washington Air

Toxic regulation as toxic air pollutants. Actual 2017 VOC emissions from the kilns were calculated using kiln emission factors and the actual amount of lumber dried during 2017. The dry kiln emission factors are based on a State of Oregon Department of Environmental Quality (ODEQ) 2014 compilation of VOC and HAP emission factors for lumber drying kilns and data from South West Clean Air Agency (SWCAA) and Oregon State University (OSU).

Lumber drying operations are subject to a BACT requirement to implement a steam management system. WEYERHAEUSER's steam management system operates the dry kilns in a manner that efficiently utilizes steam and minimizes steam demand to the boiler. Steam management controls kiln sequencing, drying temperature, kiln exhaust and overall drying time. Emissions from the dry kilns are subject to the general Washington and ORCAA standards for opacity and grain loading.

Table 3.4: Lumber Dry Kiln Potential to Emit

POLLUTANT	CAS #	SPECIES	EMISSION FACTOR @ <=200°F (LB/MBF)	EMISSION FACTOR @ >200°F (LB/MBF)	POTENTIAL TO EMIT (TPY)
PM	NA	Douglas Fir	0.089	0.089	14.0
		Hemlock	0.032	0.032	
VOC	NA	Douglas Fir	0.768	1.62	255
		Hemlock	0.380	0.526	
Total HAP	NA	Douglas Fir	0.092	0.163	43.4
		Hemlock	0.205	0.276	
					POTENTIAL TO EMIT (LBS/YR)
Acetaldehyde	75-07-0	Douglas Fir	0.051	0.040	37,800
		Hemlock	0.120	0.084	
Acrolein	107-02-8	Douglas Fir	0.0007	0.0012	724
		Hemlock	0.0015	0.0023	
Formaldehyde	50-00-0	Douglas Fir	0.0013	0.0043	1,350
		Hemlock	0.0013	0.004	
Methanol	67-56-1	Douglas Fir	0.039	0.117	58,000
		Hemlock	0.081	0.184	
Propionaldehyde	123-38-6	Douglas Fir	0.0005	0.0008	441
		Hemlock	0.0012	0.0014	

-Acetaldehyde, acrolein, formaldehyde, and methanol are all both HAPs and TAPs, while Propionaldehyde is only a HAP.

PM from the dry kilns is both PM₁₀ and PM_{2.5}.

-PTE based on highest (bolded) factors at 315MMbf/yr

-Source of factors: ODEQ, SWCAA, and OSU

3.3 EU3: Planer Mill

The planer mill and associated residual materials handling systems are considered collectively as Emission Unit 3 (EU3). WEYERHAEUSER's planing equipment and operations are located in a large building between the dry kiln cooling shed and the powerhouse. Emission units and points associated with the planing mill are located within or directly adjacent to the planing mill building. In the planer mill, rough dried lumber is planed and cut to specified sizes. Planing, cutting, and chipping within the planing mill generate dry shavings and sawdust that are either sold as a product or used as fuel. The capture, screening and transport of these residual materials from point of generation to storage areas located outside of the planing building generates wood dust emissions.

Residuals in the planing building are collected and exit the building in one of two separate pneumatic lines. One of the lines transports material to Cyclone #5, the main planing mill cyclone. The other line transports materials directly to Baghouse #2 (Carter Day Baghouse).

Cyclone #5 processes the majority of the residuals from the planing mill. Emissions from cyclone #5 are sent to planing mill Baghouse #1 (Clarke Baghouse) for removing particulate prior to exhaust to the atmosphere. Alternatively, when planing mill Baghouse #1 is malfunctioning, emissions from Cyclone #5 may be emitted directly to the atmosphere through an abort stack. Cyclone #5 and Baghouse #1 were approved in 1995 under NOCs #553 and #554.

Residuals separated by Cyclone #5 and Baghouse #1 may be transported to any one of several different end points depending on the demand for fuel by the hog fuel boiler. For any of the possible destinations, the materials are transported pneumatically. If planing mill residuals are needed for fuel, the materials are directed to the hog fuel system which is designated as Emission Unit 5 and will be discussed below. If not needed as fuel, the residuals are blown to Cyclone #6 where the materials are separated and stored in the shavings truck bin prior to truck loading and transport off-site. Emissions from Cyclone #6 are routed to Baghouse #2 (Carter Day Baghouse). Emissions from Baghouse #1 exhaust directly to the atmosphere. Alternatively, the residuals stream otherwise going to Baghouse #1 may be emitted directly to the atmosphere through an abort gate if Baghouse #1 is malfunctioning. The residual catch from Baghouse #1 is transported pneumatically to cyclone #21 which is part of the hog fuel system and will be discussed below. Planing mill Baghouse #1 was approved in 1996 under NOC #031.

Located on the East side of the shipping building is a dedicated planer chip truck bin. The bin is equipped with a target box to separate the chips from the air stream. Emissions from the target box exhaust directly to the atmosphere. The planer chip truck bin is an older unit and NOC approvals could not be found in ORCAA's files. The planer chip truck bin is no longer used; instead chips go to powerhouse where emissions are ultimately controlled by the Powerhouse Baghouse.

3.4 EU4: Sawmill

WEYERHAEUSER's sawmill operations are located in the sawmill building southeast of the lumber dry kilns. Emissions from the sawmill include particulate emissions from the generation and transporting of residual materials. Sources of particulate emissions associated with the sawmill are considered as Emission Unit 4 (EU4) and include the sawmill baghouse, sawdust truck bin, and green chip bins.

Wet or "green" residual materials are generated during debarking, milling, chipping and screening operations within the sawmill and are transported to either truck bins for sale or to the powerhouse area for use as fuel. Bark from debarking operations is first processed in the bark hog and then pneumatically transferred to Cyclone #11. Cyclone #11 separates the hog fuel on to the hog fuel pile. Cyclone #11 emissions exhaust directly to the atmosphere. Hog fuel consisting of bark is the predominant fuel consumed by WEYERHAEUSER's boiler.

As the logs are processed, sawdust and larger residuals are generated. Throughout the sawmill, sawdust and fines are separated from larger residuals by screening. Accumulated sawdust is then transported via conveyor belts to a sawdust truck bin located adjacent to the sawmill building. The

sawdust truck bin is considered as an emission point of EU4. Particulate emissions are generated as sawdust is unloaded into transport trucks. However, emissions are minimal due to the nature of this material which is derived from “green” (not dried) timber.

Waste ends, rejects and “overs” from screening operations are chipped within the sawmill building. The chips are then conveyor transferred to the dual chip bins located adjacent to the sawmill. The chip bins are considered as emission points due to particulate emissions occurring during unloading operations. There are no visible emissions during loading of the bins since the chips are loaded using conveyor belts and since the chips are derived from “green” lumber. Fugitive emissions during unloading of the bins are minimal as well due to the nature of the chips.

The sawmill baghouse processes air streams from the wood waste collection system intake ducts located throughout the sawmill. The sawmill baghouse catch is conveyed back into the sawdust stream and eventually to the sawdust truck bin. Emissions from the sawmill baghouse exhaust to the atmosphere. Alternatively, when the sawmill baghouse is malfunctioning, the air streams from sawmill ducts exhaust directly to the atmosphere for an instant while the entire dust collection system switches off. Direct exhaust to the atmosphere is minimal since the system automatically shuts down in case of baghouse malfunction.

The sawmill baghouse was approved by ORCAA in 1998 under NOC# 98NOC004. NOC approvals for the chip bins and sawdust bin could not be found in ORCAA’s files. These units were built prior to 1975 and it is likely that a NOC was not required by ORCAA for such units at this time.

3.5 EU5: Hog Fuel System

Cyclones, baghouses and conveyors associated with fuel management are considered as Emission Unit #5 (EU5). EU5 includes cyclones 7, 8, 11, 15, and 21, and the powerhouse baghouse. Out of these units, only cyclone #11 and the powerhouse baghouse exhaust to the atmosphere. Exhaust streams from cyclones 7, 8, 15, and 21 go to the powerhouse baghouse for control of particulate. All units in EU5 either have approved NOCs or are “grandfathered” units.

3.6 Insignificant Emission Units

In addition to the five emission units described in Sections 3.1 through 3.5, WEYERHAEUSER’s lumbermill includes the following emission units that are considered insignificant under WAC 173-401-530(1)(d) because they only generate fugitive emissions or under WAC 173-401-532 because they are categorically exempt.

These emissions units are exempt from permit program requirements and unit-specific monitoring, but are subject to ORCAA’s general requirements including fugitive dust, opacity, grain loading standards, and nuisance odor regulations.

Table 3.5 - Insignificant Emission Units

Process #	IEU Name	Basis for IEU Designation
Sawmill	Log infeed decks	WAC 173-401-530(1)(d)
	Cut-off saw	WAC 173-401-530(1)(d)

Table 3.5 - Insignificant Emission Units

Process #	IEU Name	Basis for IEU Designation
	Sawdust bunk overflow	WAC 173-401-530(1)(d)
	Sawdust conveyor	WAC 173-401-530(1)(d)
	Sawdust bin	WAC 173-401-530(1)(d)
	Green chip conveyor	WAC 173-401-530(1)(d)
	Chip bins	WAC 173-401-530(1)(d)
	Debarker	WAC 173-401-532(113)
	Log yard vehicle dust	WAC 173-401-530(1)(d)
	Log storage and handling	WAC 173-401-530(1)(d)
	Hog	WAC 173-401-532(113)
	Chipper	WAC 173-401-532(112)
	Building vents and openings	WAC 173-401-532(46)
	Filing room heats a melting pot of babbit for saw blade repairs	WAC 173-401-532(15)
	Portable bark separator	WAC 173-401-530(1)(d)
Powerhouse	Conveyor to hog fuel pile	WAC 173-401-530(1)(d)
	Yard hog	WAC 173-401-532(112)
	Yard hog conveyor to pile	WAC 173-401-530(1)(d)
	Ash handling	WAC 173-401-530(1)(d)
Lumber drying	Steam condensate tank vent	WAC 173-401-532(87)
Planer mill	Shavings bin	WAC 173-401-530(1)(d)
	Chipper	WAC 173-401-532(112)
	Building vents and openings	WAC 173-401-532(46)
Maintenance	Air exhaust from grinding	WAC 173-401-532(46)
	Oil vapor separators	WAC 173-401-532(88)
	Machine/maint. ceiling fans	WAC 173-401-532(46)
	Maintenance hood	WAC 173-401-532(9)
	Charging batteries	WAC 173-401-532(77)
Miscellaneous	Compressor exhaust vents	WAC 173-401-532(88)
	Compressor air dryer vent	WAC 173-401-532(88)
	Office activities	WAC 173-401-532(49)
	Finished lumber storage	WAC 173-401-530(1)(d)
	Paved/unpaved road dust	WAC 173-401-530(1)(d)
	Mobile transport tanks on vehicles	WAC 173-401-532(2)
	Lube oil tanks	WAC 173-401-532(3)
	Storage tanks and equipment for non-odorous, non-volatile materials	WAC 173-401-532(4)
	Pressurized storage of O ₂ , N ₂ , CO ₂ , air, inert gases	WAC 173-401-532(5)
	Storage of solid material, dust free handling	WAC 173-401-532(6)
	Vents from areas with permitted units having own exhaust	WAC 173-401-532(9)
	IC vehicle engines	WAC 173-401-532(10)
	Recreational fires	WAC 173-401-532(11)
	Metal cutting/soldering, HAP-free	WAC 173-401-532(12)
	Routine housekeeping	WAC 173-401-532(33)
	Street cleaning, sweeping	WAC 173-401-532(35)
	Steam cleaning	WAC 173-401-532(39)
	Portable drums, totes	WAC 173-401-532(42)
	Lawn, landscaping activities	WAC 173-401-532(43)
	Emergency flares	WAC 173-401-532(44)
	Vehicle maintenance (including exhaust)	WAC 173-401-532(45)
	Sanitary storm vents	WAC 173-401-532(47)
	Bathroom vents	WAC 173-401-532(48)
	Personal care activities	WAC 173-401-532(50)
	Lab sampling connections	WAC 173-401-532(51)
	Fuel, exhaust from parking lots	WAC 173-401-532(54)

Table 3.5 - Insignificant Emission Units

Process #	IEU Name	Basis for IEU Designation
	Material working with no outlet to atmosphere	WAC 173-401-532(55)
	Demineralization, de-aeration of H ₂ O	WAC 173-401-532(61)
	Structural changes, no air emissions	WAC 173-401-532(67)
	Lubricant handling	WAC 173-401-532(69)
	Sample gathering, preparation	WAC 173-401-532(73)
	Repair and maintenance activities	WAC 173-401-532(74)
	Solid waste containers	WAC 173-401-532(79)
	Wire strippers	WAC 173-401-532(82)
	Totally enclosed conveyors	WAC 173-401-532(86)
	Steam leaks	WAC 173-401-532(89)
	Clean condensate tanks	WAC 173-401-532(96)
	Vacuum system exhausts	WAC 173-401-532(108)
	Non-PCB oil containers (not tanks)	WAC 173-401-532(118)
	Wastewater treatment system units	WAC 173-401-532(120)

3.7 Fee Eligible Emissions Units

ORCAA calculates annual fees for Title V sources (AOP fees) using a formula that includes a facility fee, a fee based on the number of emissions units, and a fee based on the actual amount of annual emissions. The intent of this formula is to relate AOP fees to ORCAA’s workload and the source’s air impacts. The formula used to calculate AOP fees is found in ORCAA Rule 3.2. The definition of *emission unit* found in ORCAA Rule 1.4 also applies. For WEYERHAEUSER, fee eligible emission units include EU1- EU5.

4.0 Emissions

Emissions at WEYERHAEUSER include particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and volatile organic compounds (VOCs). Within the group of compounds emitted by WEYERHAEUSER considered VOCs, there are some classified as Hazardous Air Pollutants (HAPs), some classified as Toxic Air Pollutants (TAPs), some are both TAPs and HAPs, and some are only VOCs.

WEYERHAEUSER’s actual annual emissions for calendar year 2017 are shown in Table 4.1.

Table 4.1 Actual Emissions of Criteria Pollutants- 2017

Pollutant	2017 Emissions (ton/yr)	Emissions Factors
PM _{2.5}	9.0	<p>Boiler: Based on the 2016 Stack Test.</p> <p>Cyclones: FIRE 6.23 October 2000, conservatively assumed PM10=PM2.5.</p> <p>Debarker: 15% of PM10 found in EPA Factor Listing Document - EPA-454-R-95-012 (1995)</p> <p>Dry kilns: Weyerhaeuser Office of the Environment, e-mail Johnson 3/9/99; Weyerhaeuser NR Raymond Sawmill</p> <p>Road Dust: Silt loading values from AP-42 Section 13.2.2 (11/06)</p> <p>Truck Bins: EPA AP-42 13.2.4-4 (11/06)</p>

PM ₁₀	15.5	Boiler: Based on the 2016 Stack Test Cyclones: FIRE 6.23 October 2000 Debarker: EPA Factor Listing Document - EPA-454-R-95-012 (1995) Dry kilns: Weyerhaeuser Office of the Environment, e-mail Johnson 3/9/99; Weyerhaeuser Raymond Sawmill Road Dust: Silt loading values from AP-42 Section 13.2.2 (11/06) Truck Bins: EPA AP-42 13.2.4-4 (11/06)
NO _x	25.9	Boiler: Based on the 2016 Stack Test
CO	4.2	Boiler: Based on the 2016 Stack Test
VOC	62.2	Boiler: Factor Ref. VOC lb / MMBTU: EPA AP-42, Table 1.6-3 (9/03) Dry Kilns: Softwood Species - WPP1 VOC, HAP, and individual HAP data from ODEQ 2014 Compilation of VOC and HAP Emission Factors for Lumber Drying Kilns. Hardwood Species - WPP1 VOC, HAP, and individual HAP data calculated using same method as softwood using data from SWCAA and OSU (see emissions inventory sheets).
SO ₂	1.5	Boiler: Based on the 2016 Stack Test

- Annual emissions will vary from year to year based on operational conditions at the facility. Data presented above were summarized from the 2017 Annual Emission Inventory submitted to ORCAA in Spring 2018.

Table 4.2 Facility-Wide Potential to Emit - Criteria Pollutants and Major HAPs

Emission Description	Annual Potential to Emit in Tons								
	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOC	Total HAPs	Acetaldehyde	Methanol
Wellons Boiler	282	271	10.1	10.1	12.6	8.6	-	-	-
Dry Kilns	-	-	14.0	14.0	-	255	43.4	18.9	29.0
Wood Waste Collection	-	-	0.7	0.7	-	-	-	-	-
Fugitive Emissions - roads	-	-	1.3	0.1	-	-	-	-	-
Log Debarking	-	-	3.6	0.5	-	-	-	-	-
Truck Bins	-	-	4.0	1.2	-	-	-	-	-
Wood Waste (e.g. hogged fuel)	-	-	1.7	0.5	-	-	-	-	-
Total	282	271	35.4	27.2	12.6	263	43.4	18.9	29.0

-PTE emission factors based on 2017 material usage factors and permit pollutant limits

-Acetaldehyde and Methanol max PTE emission factors occur at different kiln temperatures

5.0 New Source Review Approvals

WEYERHAEUSER has received numerous Notice of Construction (NOC) approvals from ORCAA for various equipment installations and operational changes. Table 5.1 provides a summary of NOC approvals and conditions from all NOC Orders of Approval and the status of each condition in WEYERHAEUSER's AOP. When possible, conditions from the Approval Order have been streamlined (combined) with standard permit conditions and other applicable requirements. If part of an Approval Order condition is still applicable while part is not (e.g. if part of a condition only applies during initial startup), only the applicable part was incorporated into the AOP.

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
NOC no number issued: 7/17/73	N/A	Unconditional approval for shake mill equipment.	No Longer Applies: WEYERHAEUSER's shake mill is located off-site of the Raymond mill and is no longer owned by WEYERHAEUSER.
NOC no number issued: 2/5/74	N/A	Unconditional approval of cyclone for separating cedar waste (unit ID# 4, 55' ht, 2000 acfm).	No Longer Applies: WEYERHAEUSER's shake mill is located off-site of the Raymond mill and is no longer owned by WEYERHAEUSER.
NOC no number issued: 2/5/74	N/A	Unconditional approval of cyclone for separating wood chip material (unit ID# 5, 55' ft, 1500 cfm)	No Longer Applies: WEYERHAEUSER's shake mill is located off-site of the Raymond mill and is no longer owned by WEYERHAEUSER.
NOC no number issued: 2/5/74	N/A	Unconditional approval of cyclone for separating cedar sawdust (cyclone #6, 45' ht, 2000 acfm)	No Longer Applies: WEYERHAEUSER's shake mill is located off-site of the Raymond mill and is no longer owned by WEYERHAEUSER.
NOC no number issued: 11/25/74	N/A	Unconditional approval of bark press and fluid bed unit to be added to boiler #1 (old fluidized bed boiler).	No Longer Applies: WEYERHAEUSER's fluidized bed boiler no longer exists. The fluidized bed boiler was replaced by the current Wellons hog fuel boiler in 1995.
NOC no number issued: 9/9/75	N/A	Unconditional approval of "low pressure" cyclone for separating dry shavings and sawdust (unit ID# 8, 63' ht, 1377 acfm).	No Longer Applies: This NOC was amended by subsequent NOC for cyclone #8
NOC no number issued: 9/9/75	N/A	Unconditional approval of "high pressure" cyclone for separating dry shavings and sawdust (cyclone #8, 50' ht.)	In effect, unconditional.
NOC no number issued: 9/9/75	N/A	Unconditional approval of cyclone for separating dry shavings and sawdust (unit ID #7, 108' ht, 9480 acfm). Notes on NOC data sheet refer to unit as "Wellons Bin".	No Longer Applies: This NOC was amended by subsequent NOC for cyclone #7 issued 9/9/75.
NOC no number issued: 9/9/75	N/A	Unconditional approval of cyclone for separating dry shavings and sawdust (cyclone #7, 95' ht, , Sutorbilt model 22x60, 200 hp blower). Notes on NOC data sheet refer to unit as "Wellons Bin".	In effect, unconditional.

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
NOC #112 issued: 4/19/76	N/A	Unconditional approval for a cyclone for separating sawdust and shavings (Cyclone #11, 60' ht, 9500 acfm, Sutorbilt model 22x60, 200 hp blower).	No Longer Applies: Cyclone replaced by Western Pneumatics, Inc. cyclone.
NOC #152 issued: 10/27/76	NOC Summary	Unconditional approval of boiler ID fan and air pre-heater bypass.	No Longer Applies: WEYERHAEUSER's fluidized bed boiler was replaced by the current Wellons hog fuel boiler in 1995.
NOC #213 issued 12/30/77	NOC Summary	Unconditional approval of cyclone for separating cedar and shingle mill waste (unit ID# ?, ht ?, 19,800 acfm)	Former location at shake and shingle mill no longer owned by WEYERHAEUSER.
NOC #263 issued sometime in 1978	NOC Summary	Unconditional approval of wet scrubber for boiler #1.	No Longer Applies: WEYERHAEUSER's fluidized bed boiler was replaced by the current Wellons hog fuel boiler in 1995.
NOC #270 4/30/79	NOC Summary	Unconditional NOC approval of multiclone for fluidized bed boiler.	No Longer Applies: WEYERHAEUSER's fluidized bed boiler was replaced by the current Wellons hog fuel boiler in 1995.
NOC #338 8/30/83	NOC Summary	Unconditional approval of filing room for saw and planer knife sharpening.	In effect, unconditional.
NOC #483 10/12/92	NOC Summary	Determination was that a NOC for the dry kiln replacements was not required as the replacement was "in-kind".	NOC application submitted, however final determination was that NOC approval was not required.
NOC #501 11/23/92	NOC Summary	Conditional approval of new Dayton cyclone for cross-cut saw.	Superseded by 98NOC009
NOC #553 issued: 2/14/93 amended: 5/18/95 amended: 12/3/99	NOC Summary	Conditional approval of new dust collection system for planing mill. System includes: 1. planing mill BH #1 2. planing mill cyclone #5	Applicable Requirements
	1.	The planer mill dust collection system shall be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement. The equipment was established and equipment specifications have been verified by ORCAA inspection.

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
	2.	Specifies that ORCAA shall be notified prior to any alterations or modifications that would trigger requirements for a NOC.	This condition simply states the requirement that ORCAA be notified prior to any changes that would trigger new source review (NSR). The condition was added to the approval order for purposes of clarification. Since NSR requirements are already contained in WAC 173-400, and since these requirements are applicable when triggered, this condition is not considered as an applicable requirement for this permit.
	3.	Completion notice required.	Not an ongoing applicable requirement. The equipment was established and ORCAA was notified.
	4.	Contains specific O&M and monitoring requirements for the planer mill baghouse: a) O&M plan b) monitor pressure drop c) gr/dscf limit d) 10% opacity limit	Applicable requirement AOP conditions: AR3.3 (grain loading limit) AR3.6 (opacity limit) AR3.10 (O&M plan requirement) AR3.11 (Monitor Pressure Drop)
	5.	Generally defines the layout of the planer mill cyclone in the system and specifies that there shall be no fugitive leaks from the system.	Applicable requirement AOP condition: AR3.12
	6.	Generally defines the layout of the truck bin cyclone and specifies that there shall be no fugitive leaks from the system.	Applicable requirement AOP condition: AR3.13
	7.	Generally defines the truck bin.	Applicable requirement AOP condition: AR3.14
	8.	Requires WEYERHAEUSER to develop and implement an O&M plan for purposes of maintaining the planer mill dust collection system.	Applicable requirement AOP condition: AR3.9
	9.	Requires Order of Approval and O&M records be maintained on-site and made available upon request.	Applicable requirement AOP condition: RK5

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
	10.	Requires that total annual product throughput and other process information necessary to calculate annual particulate emissions from the facility be reported to ORCAA on standard ORCAA forms.	Applicable requirement AOP condition: R12
	11.	This condition simply states the enforceability of the conditions of the order.	Redundant. This condition simply states the utility of regulatory approval orders.
NOC #554 issued: 2/14/93 amended: 5/18/95 amended: 12/3/99 Superseded: 3/15/2006	NOC Summary	Conditional approval of powerhouse baghouse system.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	1.	The powerhouse baghouse system shall be in accordance with the equipment types and specifications as described in the associated NOC application.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	2.	Specifies that ORCAA shall be notified prior to any alterations or modifications that would trigger requirements for a NOC.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	3.	Completion notice required.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	4.	Contains specific O&M and monitoring requirements for the new powerhouse: 1. O&M plan 2. monitor pressure drop 3. 0.01 gr/dscf limit 4. 10% opacity limit	Superseded – equipment destroyed in fire and superseded by 06NOC467
	5.	Requires WEYERHAEUSER to develop and implement an O&M plan for purposes of maintaining the planing mill dust collection system.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	6.	Specifies certain records be maintained on-site and made available upon request.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	7.	Requires that total annual product throughput and other process information necessary to calculate annual particulate emissions from the facility be reported to ORCAA on standard ORCAA forms.	Superseded – equipment destroyed in fire and superseded by 06NOC467
	8.	This condition simply states the enforceability of the conditions of the order.	Superseded – equipment destroyed in fire and superseded by 06NOC467
NOC #570 issued 3/2/94 amended: 12/3/99	NOC Summary	Conditional approval of dry kiln #3.	In effect - unconditional
NOC 94NOC589	NOC Summary	ESP Approval: Conditional approval to install an electrostatic precipitator.	This approval order was superseded by 95NOC646.
	1.	Completion notice required.	

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
Reissued: 5/18/95	2.	Requires the new ESP be in accordance with the equipment types and specifications as described in the associated NOC application.	
	3.	ESP particulate limit	
	4.	ESP opacity limit	
	5.	Specifies requirements for boiler stack sampling ports and platforms.	
	6.	Initial compliance testing.	
	7.	Requires an ESP O&M plan	
	8.	Specifies required records to be maintained on site.	
	9.	Excess emissions reporting requirements.	
	10.	This condition simply states the enforceability of the conditions of the order.	
	NOC 95NOC646 95NOC647 combined Issued: 8/8/95 Amended: 12/3/99	NOC Summary	Conditional approval for: 1. Wellons boiler Dry kilns #5 & #6
1.		Completion notice required.	Not an ongoing applicable requirement. The equipment was established and ORCAA was notified.
2.		Requires the new boiler and dry kilns be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement. The equipment was established and equipment specifications have been verified by ORCAA inspection.
3.		Boiler particulate limit.	Applicable requirement AOP condition AR1.4
4.		Boiler opacity limit.	Applicable requirement AOP condition AR1.7
5.		Boiler NOx limit.	Applicable requirement AOP condition AR1.11
6.		Boiler CO limit	Applicable requirement AOP condition AR1.12
7.		Specifies requirements for boiler stack sampling ports and platforms.	Not an ongoing applicable requirement. The equipment was established and equipment specifications have been verified by ORCAA inspection.
8.1.		The opacity CEMS shall be certified and installed in accordance with 40 CFR Part 60, Performance Specification #1 (appendix B).	Applicable requirement AOP condition AR1.30(a)

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
	8.2.	The opacity CEMS shall be equipped with a strip chart recorder or data acquisition system (DAS) capable of computing and recording stack gas opacity in three consecutive minute averages. The DAS or strip chart recorder shall record and display opacity values to 0.5% opacity.	Applicable requirement AOP condition AR1.30(b)
	8.3.	Prior to installation of the CEMS, the owner or operator shall provide ORCAA a written manufacturers certificate of conformance with Performance Specification 1.	Applicable requirement AOP condition AR1.30(c)
	8.4.	An opacity CEMS quality assurance plan conforming with 40 CFR Part 60, Appendix F and the EPA publication <u>Recommended Quality Assurance Procedures for Opacity Continuous Emissions Monitoring Systems</u> (EPA 340/1-86-010) shall be developed and implemented.	Applicable requirement AOP condition AR1.30(d)
	8.5.	The opacity CEMS shall be operational and tested for compliance with 40 CFR Part 60, Appendix B Performance Specification 1 no later than 90 days after initial startup. All results from certification testing pursuant to Performance Specification 1 shall be submitted to ORCAA as verification of compliance no later than 120 days after initial startup.	Applicable requirement AOP condition AR1.30(e)
	9.	Requires an O&M plan for the boiler and identifies the minimum elements for the plan.	Applicable requirement AOP condition AR1.14
	9.4.	Requires procedures for operating the fluidized bed boiler.	Obsolete. The fluidized bed boiler has since been removed.
	10.	Requires reporting of excess emissions and malfunctions.	Applicable requirement AOP condition AR1.19
	11.	Specifies required records to be maintained on site.	Applicable requirement AOP condition RK1 & RK19
	12.	Specifies the type of hog fuel that can be burned in the boiler.	Not applicable- this specific condition was superseded by 01NOC110 Condition #12.
	13.	This condition simply states the enforceability of the conditions of the order.	Redundant. This condition simply states the utility of regulatory approval orders.
NOC #589 issued 12/13/95	NOC Summary	This NOC approved a temporary diesel fired portable boiler that was brought on-site for a period of less than a year.	Obsolete This boiler was intended as a temporary unit and is now gone.

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
NOC 96NOC031 Issued: 12/4/96 Amended: 12/3/99	NOC Summary	Conditional approval of new planing mill baghouse (#2, "Carter Day") and cyclone #21.	In effect - conditional
	1.	Completion notice required.	Not an ongoing applicable requirement. The equipment was established and ORCAA was notified.
	2.	Requires the planing mill baghouse and cyclone to be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement. The equipment was established and equipment specifications have been verified by ORCAA inspection.
	3.	Establishes an opacity limitation for emissions from the new system.	Applicable requirement AOP condition AR3.7
	4.	Prohibits visual leaks from the new system.	Applicable requirement AOP condition AR3.15
	5.	Requires an O&M plan for the new system.	Applicable requirement AOP conditions AR3.9 & AR3.10
	6.	Specifies records to be maintained on site.	Applicable requirement AOP condition RK21
NOC 97NOC025 issued 7/25/97 amended: 12/3/99	NOC Summary	Conditional approval of 4 new lumber dry kilns	In effect - conditional
	1.	Completion notice required.	Not an ongoing applicable requirement. The equipment was established and ORCAA was notified.
NOC 98NOC004 issued 1/21/98 amended: 12/3/99	NOC Summary	Conditional approval of a new sawmill dust collection system (sawmill baghouse).	In effect - conditional
	1.	Requires the new sawmill dust collection system be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement. The equipment was established and equipment specifications have been verified by ORCAA inspection.
	2.	Specifies a 10% opacity limitation for the sawmill baghouse.	Applicable requirement AOP condition AR4.5
	3.	Completion notice required.	Not an ongoing applicable requirement. The equipment was established and ORCAA was notified.
NOC 98NOC009 issued	NOC Summary	Conditional approval of a new baghouse dust collection system (Superior Systems, Inc. MRM-12) for the package saw, replacing Cyclone#19.	In effect - conditional

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
3/31/98 amended: 12/3/99	1.	Requires the baghouse be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement. The equipment was established and equipment specifications have been verified by ORCAA inspection.
	2.	Specifies a 10% opacity limit for the package saw baghouse.	Applicable Requirement AOP condition AR3.8
	3.	Completion notice required.	Not an ongoing applicable requirement. The equipment was established and ORCAA was notified.
NOC 01NOC110 Issued: 2/2/2001	NOC Summary	Revised Condition 12 of 95NOC646. This condition allows for the burning of hog fuel that has been in contact with salt water.	Applicable requirement AOP Condition AR1.13
NOC 01NOC177 Issued: 8/7/2001	NOC Summary	This NOC did not result in conditions of approval.	This NOC did not result in ongoing applicable requirements.
NOC 06NOC467 Issued: 4/6/2006	NOC Summary	Install a Model 40-20 Clarke baghouse to replace an identical model destroyed in a fire.	Applicable requirements
	1.	Requires the new equipment be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement.
	2.	Visible emissions from the Powerhouse Baghouse shall not exceed 10% opacity for a period or periods aggregating more than 3 minutes in any 1 hour, as determined by the Washington Department of Ecology Method 9A.	Applicable requirement AOP Condition AR3.16
	3.	The owner or operator shall maintain written procedures in a compliance assurance plan that provides instructions for inspection, maintenance, and repair of the Powerhouse Baghouse. The compliance assurance plan shall contain, but not be limited to, the following: a) A schedule for inspecting the Powerhouse Baghouse; b) Procedures for inspecting the Powerhouse Baghouse; and, c) Standard log for recording inspections and repairs of the Powerhouse Baghouse.	Applicable requirement AOP Condition AR5.6
	4.	The owner or operator shall monitor the differential pressure across the Powerhouse Baghouse on at least a weekly basis.	Applicable requirement AOP Condition M9 Table M1

Table 5.1 Summary of Air Regulatory History

NOC # (date)	NOC Condition #	Description (for informational purposes only)	Applicability AOP Condition #
	5.	Records required by this Approval Order shall include the date and name of the person making the entry. If the Powerhouse Baghouse is not operating or is malfunctioning during a specific time period, a record shall be made to that effect. The following data shall be recorded at the frequency indicated, maintained for a minimum period of at least five years, and made available for inspection by ORCAA upon request.	Applicable requirement AOP Condition RK20
NOC 15NOC1130 Issued: 11/9/2015	NOC Summary	Replace hog fuel cyclone (Cyclone #11) with “in-kind” high efficiency cyclone.	Applicable requirements
	1.	Requires the new equipment be in accordance with the equipment types and specifications as described in the associated NOC application.	Not an ongoing applicable requirement
	2.	Requires visual opacity not to exceed ten (10) percent opacity for more than three minutes in any one hour as determined by Department of Ecology Reference Method 9A.	Applicable requirement AOP Condition AR5.7
	3.	Requires an Operations and Maintenance (O&M) plan for purposes of maintaining and operating Cyclone #11.	Applicable requirement AOP Condition AR5.8
	4.	Requires records be kept for five years from origination and to include time, date, and name of person making the entry for the following: <ul style="list-style-type: none"> a. O&M plan per Condition 3; b. For each occurrence, actions taken to inspect/repair Cyclone #11; and, c. For each occurrence, description of Cyclone #11 malfunctioning events. 	Applicable requirement AOP Condition RK22

6.0 Regulatory Determinations

6.1 Title V of the Federal Clean Air Act

The WEYERHAEUSER Lumber Mill is a major source of hazardous air pollutants, CO, NO_x, and VOC's and, therefore, subject to Title V of the Federal Clean Air Act. Since the WEYERHAEUSER Lumber Mill is subject to Title V of the Federal Clean Air Act, it is therefore required to apply for and obtain an Air Operating Permit because EU2, lumber drying, has a potential to emit 18.9 tons per year of acetaldehyde and 29 tons per year of methanol, which are hazardous air pollutants listed in Section 112(b) of the Federal Clean Air Act, 282 tons per year of CO, 271 tons per year of NO_x, and 255 tons per year of VOC's. WEYERHAEUSER has operated under either a permit application shield or under a permit at all times it was subject to Title V permit requirements.

6.2 New Source Performance Standards (NSPS)

EPA establishes New Source Performance Standards (NSPS) for new, modified or reconstructed facilities and source categories emitting criteria air pollutants. NSPS are codified in 40 CFR Part 60. The following sections detail regulatory determinations for relevant regulations under 40 CFR Part 60, referred to as “Subparts.”

40 CFR Part 60, Subpart D: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to fossil-fuel and wood-residue fired steam generating units capable of firing fossil fuels at a heat input rate of more than 250 MMBtu/hr and that commenced construction or modification after August 7, 1971 (except it applies to lignite-fired steam generators that commenced construction or modification after December 22, 1976).

In this case, the Wellons hog fuel boiler is not rated at more than 250 MMBtu/hr; therefore, the standard does not apply to the Wellons hog fuel boiler. – **NOT APPLICABLE**

40 CFR Part 60, Subpart Da: Standards of Performance for Electric Utility Steam Generating Units

Standards of Performance for Electric Utility Steam Generating Units

This subpart applies to electric utility steam generating units with a heat input rate greater than 250 MMBtu/hr that commenced construction or modification after September 18, 1978. Within Subpart Da electric utility steam generating unit is defined as a steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale.

WEYERHAEUSER does not have the capability to generate electricity, therefore, Subpart Da does not apply. – **NOT APPLICABLE**

40 CFR Part 60, Subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The requirements of 40 CFR Part 60 Subpart Db (Subpart WW) apply to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

In this case, WEYERHAEUSER’s Wellons hog fuel boiler has a heat input capacity greater than 100 MMBtu/hr (this unit has a heat input capacity of 115 MMBtu/hr) and was constructed after June 19, 1984 (this unit was constructed in 1996). As a result, the requirements of Subpart Db apply to the Wellons hog fuel boiler. **-APPLICABLE**

40 CFR Part 60, Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to each steam generating unit that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr and that commenced construction, modification, or reconstruction after June 9, 1989.

In this case, the Wellons hog fuel boiler is rated at greater than 100 MMBtu/hr; therefore this standard does not apply to the Wellons hog fuel boiler. **-NOT APPLICABLE**

40 CFR Part 60 Subpart Cb: Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994

The designated facility to which these guidelines apply is each municipal waste combustor unit with a combustion capacity greater than 250 tons per day of municipal solid waste for which construction was commenced on or before September 20, 1994.

WEYERHAEUSER does not burn any fuel meeting the applicable definition of municipal solid waste (the applicable definition is found in 40 CFR Part 60 Subpart Eb); therefore, this standard does not apply to the Wellons hog fuel boiler nor any other emission units at WEYERHAEUSER. **- NOT APPLICABLE**

40 CFR Part 60 Subpart Eb: Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996

The affected facility to which this subpart applies is each municipal waste combustor unit with a combustion capacity greater than 250 tons per day of municipal solid waste for which construction, modification, or reconstruction is commenced after September 20, 1994.

WEYERHAEUSER does not burn any fuel meeting the applicable definition of municipal solid waste (the applicable definition is found in 40 CFR Part 60 Subpart Eb); therefore, this standard does not apply to the Wellons hog fuel boiler nor any other emission units at WEYERHAEUSER. **- NOT APPLICABLE**

40 CFR Part 60 Subpart Ec: Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996

The affected facility to which this subpart applies is each individual hospital/medical/infectious waste incinerator (HMIWI) for which construction is commenced after June 20, 1996 or for which modification is commenced after March 16, 1998.

In this case, there are no emission units at WEYERHAEUSER that burn Hospital/Medical/Infectious waste; therefore, this standard does not apply to emission units located at WEYERHAEUSER. **- NOT APPLICABLE**

40 CFR Part 60 Subpart CCCC: Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001

The affected facility to which this subpart applies is each new incineration unit as defined in §60.2015 that is a commercial or industrial solid waste incinerator (CISWI) unit as defined in §60.2265.

In this case, WEYERHAEUSER does not operate any units meeting the definition of CISWI found in Subpart CCCC. Specifically, the definition of CISWI found in Subpart CCCC excludes combustion units that employ a heat recovery device. The Wellons hog fuel boiler (the only emission unit at WEYERHAEUSER that could physically function as a CISWI) employs a heat recovery device; therefore, the requirements of Subpart CCCC do not apply to the Wellons hog fuel boiler. And since there are no other emission units physically capable of functioning as a CISWI, the requirements found in Subpart CCCC do not apply to any emission units found at WEYERHAEUSER.- **NOT APPLICABLE**

40 CFR Part 60 Subpart EEEE: Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for which Modification or Reconstruction is Commenced on or After June 16, 2006

The affected facility to which this subpart applies is each new incineration unit as defined in §60.2886, and other solid waste incinerator (OSWI) unit as defined in §60.2977.

In this case, WEYERHAEUSER does not operate any units meeting the definition of OSWI found in Subpart EEEE. Specifically, the definition of OSWI found in Subpart EEEE excludes combustion units that employ a heat recovery device. The Wellons hog fuel boiler (the only emission unit at WEYERHAEUSER that could physically function as a OSWI) employs a heat recovery device; therefore, the requirements of Subpart EEEE do not apply to the Wellons hog fuel boiler. And since there are no other emission units physically capable of functioning as a OSWI, the requirements found in Subpart EEEE do not apply to any emission units found at WEYERHAEUSER. – **NOT APPLICABLE**

6.3 National Emission Standards for Hazardous Air Pollutants (NESHAP)

EPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR Part 63 to regulate HAP emissions from major sources of HAP. This regulatory program defines a major source as any facility that has the potential to emit more than 10 tons per year of a single HAP or more than 25 tons per year of all HAPs combined. Based on current estimates of emissions, WEYERHAEUSER is a major HAP source.

40 CFR Part 63, Subpart DDDD: National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products: According to § 63.2231(a), facilities that are major sources of hazardous air pollutants and kiln dry lumber are subject to this subpart. According to § 63.2252, no requirements from this subpart or subpart A other than initial notification apply to equipment, including lumber kilns, that are not subject to any of the compliance options or work practice standards.

The only requirements therein to which the facility is subject are the initial notification requirements in § 63.9(b). These requirements were met by WEYERHAEUSER during the initial compliance

demonstration prior to September 28, 2004. There are no ongoing requirements in Subpart DDDD to which the facility is subject or with which WEYERHAEUSER must demonstrate compliance.

-APPLICABLE, HOWEVER, THERE ARE NO ONGOING REQUIREMENTS BEYOND INITIAL REPORTING

40 CFR Part 63, Subpart QQQQ: National Emission Standards for Hazardous Air Pollutants for Wood Building Products

The National Emission Standards for Hazardous Air Pollutants for Wood Building Products was promulgated on June 21, 2002 and applies to all new and existing facilities that apply coatings to wood building products and that are located at a major source of HAPs.

In this case, WEYERHAEUSER does not apply coatings to any of the products produced at the facility. As a result, WEYERHAEUSER is not subject to the requirements of 40 CFR Part 63 Subpart QQQQ. – **NOT APPLICABLE**

40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources for HAP emissions. In this case, WEYERHAEUSER is a major source of HAPs.

WEYERHAEUSER used to have a diesel fire pump engine, however, the engine is no longer in service. The facility doesn't have or operate any stationary diesel engines. **-NOT APPLICABLE**

40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (The Boiler MACT):

Subpart DDDDD (commonly referred to as the Boiler MACT) applies to industrial, commercial, and institutional boilers and process heaters at major sources of HAPs. The Wellons Hog Fuel Boiler, designated EU1, is an affected source under this subpart and is subject to the applicable provisions therein.

The Wellons hog fuel boiler is regulated as an existing boiler under the Boiler MACT and is required to comply with limits and standards by January 31, 2016. For purposes of regulation under 40 CFR Part 63, Subpart DDDDD, the Boiler is classified as an existing boiler under both the "Units designed to burn solid fuel" and "Fuel cells designed to burn biomass/bio-based solid" classifications. Requirements for other subcategories do not apply. **-APPLICABLE**

40 CFR Part 63, Subpart HHHHH: National Emission Standards for Hazardous Air Pollutants for Miscellaneous Coating Manufacturing:

The National Emission Standards for Hazardous Air Pollutants for Miscellaneous Coating Manufacturing applies to miscellaneous coating manufacturing operations defined in § 63.7985(b) that are used to manufacture coatings.

WEYERHAEUSER uses stencil and/or paint to mark lumber bundles, but the facility does not use manufacturing operations as described in § 63.7985(b), or any other manufacturing operation, to manufacture these marking materials. Therefore, WEYERHAEUSER is not subject to 40 CFR 63 Subpart HHHHH. **-NOT APPLICABLE**

40 CFR Part 63, Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters at Area Sources:

In June of 2010, EPA proposed the NESHAP for boilers and process heaters at area sources of hazardous air pollutants (HAP). The term “Area Sources” refers to sources of HAP emissions that are not major. The final rule was posted on the Federal Register on February 1, 2013. Because WEYERHAEUSER is a major source of HAP emissions, WEYERHAEUSER is not an “Area Source” of HAP emissions and is not subject to Subpart JJJJJJ. **-NOT APPLICABLE**

6.4 Accidental Release Prevention Program

Section 112r of the Clean Air Act Amendments of 1990 require facilities using substances that pose the greatest risk of harm from accidental releases to develop and implement Risk Management Programs including:

- Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases scenarios;
- Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and
- Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g., the fire department) should an accident occur.

Section 112r applies to stationary sources that manufacture, use, store, or otherwise handle more than a threshold quantity of a listed regulated substance in a process. Since WEYERHAEUSER does not store or use any of the regulated substances listed in Section 112(r) of the Federal Clean Air Act above a threshold quantity, Section 112(r) requirements do not apply to WEYERHAEUSER.

6.5 Prevention of Significant Deterioration (PSD)

The goal of the PSD program is to ensure that construction of new major stationary sources and major modifications will not significantly degrade areas with pre-existing good air quality. Though the WEYERHAEUSER Lumber Mill is a major source under the State’s PSD program, WEYERHAEUSER has not triggered a PSD review to date. The Department of Ecology, the PSD authority in Washington State, has determined that PSD review was not required for the lumber mill. Therefore, the mill was not required to obtain a PSD permit.

6.6 Compliance Assurance Monitoring (CAM) Rule

CAM applicability under §64.2(a) is determined on a pollutant by pollutant basis. CAM applies to a pollutant subject to an emissions limitation or standard when a control device is used to meet the limitation or standard and potential, pre-control device emissions are greater than a major source threshold. The CAM rule exempts backup utility units. Also, CAM does not apply to emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act, and emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1.

EU2 does not employ a control device, therefore it is not subject to CAM.

The baghouses associated with the Planer Mill, Sawmill, and Hog Fuel System are all subject to a pollutant-specific emission limit for PM₁₀ and PM_{2.5} as identified in Table M1. The emission units all use a baghouse control device and are all subject to the CAM Rule.

Hog Fuel Boiler

Emission Unit #1 (EU1), the hog fuel fired boiler, has the pre-control potential to be a major source of CO, NO_x, PM_{2.5}, and PM₁₀ and is subject to emissions limits for all four pollutants. A control device is not used to meet the limit for CO or NO_x, so the CAM Rule does not apply to CO or NO_x emissions. However, EU1 uses an ESP for control of PM₁₀ and PM_{2.5}, therefore the CAM Rule does apply to PM₁₀ and PM_{2.5}. CAM for PM₁₀ and PM_{2.5} is met through Subpart DDDDD monitoring. Per Response 17 of the EPA Frequently Asked Questions Concerning the CAM Rule guidance document (<https://www3.epa.gov/ttnchie1/mkb/documents/camfaq2.pdf>), the CAM rule imposes no additional monitoring on the emission unit for showing compliance with MACT limits, and MACT monitoring may satisfy CAM requirements.

The applicable boiler CAM monitoring requirements for PM₁₀ and PM_{2.5} are satisfied by the MACT monitoring requirements of Subpart DDDDD, so there are no further CAM monitoring requirements. However, WEYERHAEUSER stated in an email correspondence dated 8/9/2018, “[WEYERHAEUSER’s] 2004 AOP renewal application included a CAM applicability determination and CAM plan. [WEYERHAEUSER] implemented the CAM plan and continue[s] to fulfil the AOP requirements. The facility is compliant with the Boiler MACT requirements. Boiler MACT and CAM are independent regulations and as such are subject to independent revision. A future rule revision could create a challenge. [WEYERHAEUSER] prefer[s] to preserve the CAM requirements from the current AOP 6.13 in the new AOP.”

Since continuing to incorporate the CAM plan provides greater monitoring requirements than necessary, ORCAA will honor WEYERHAEUSER’s request and will continue to incorporate the established CAM plan in the monitoring requirements identified in Table M1 of Condition M9 (formerly Condition 6.13 in the previous AOP).

6.7 State Greenhouse Gas (GHG) Reporting Rule

According to WAC 173-441-030(1), the State GHG Reporting Rule applies to industrial facilities that emit at least 10,000 metric tons per year of GHG in terms of carbon dioxide equivalents. WAC 173-441-020 defines a “facility” as any physical property, plant, building, structure, source, or stationary equipment located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right of way and under common ownership or common control, that emits or may emit any greenhouse gas. GHG emissions from the facility are high enough to trigger GHG reporting. Therefore, the State GHG Reporting Rule

applies to the facility and the applicable requirements are in the AOP. See Table 3.3 for GHG emissions.

7.0 Compliance History

ORCAA issued three (3) notices of violation (NOV) to the lumber mill since 2004 as shown in Table 7.1. All NOV's issued up to the date of issuance of this permit were resolved and are closed to further enforcement action.

Table 7.1: Air Compliance History

DATE	NOV #	DESCRIPTION	RESOLUTION
03/01/2004	2158	Condition 3.2 of 99AOP003 – Failure to submit required semi-annual monitoring report in accordance with RCW 70.94.161(9).	Paid \$400 penalty in full
01/01/2015	3380	Condition 6.7 of 04AOP387- Failure to monitor air pollution control equipment according to Table 6.1 of 04AOP387.	Paid \$2,000 penalty in full
01/23/2015			
02/20/2015			
04/17/2015			
5/30/2015	3378	Condition 2.1 of 04AOP387- Duty to comply with conditions of permit ORCAA Rule 8.2(a)- Violation of general standard for maximum visual emissions WAC 173-400-040(2) – General Emission standards (opacity) WAC 173-401-620(2)(a)- Duty to comply with conditions of permit	Paid \$2,000 penalty in full

-AOP permit condition numbering changed in 12AOP915.

8.0 Monitoring and Gap Filling

The monitoring conditions in Section VII of WEYERHAEUSER's Raymond Lumber Mill AOP are, for the most part, standard conditions sufficient to fill gaps and determine the compliance status regarding the applicable requirements in Section VI of the AOP.

8.1 Monitoring Associated with the Wellons Hog-Fuel Boiler

Combustion of hogged fuel and wood waste results in the emission of criteria pollutants, greenhouse gases, HAP, and TAP. The boiler uses continuous monitoring equipment to monitor opacity. Table M2 of Condition M9 and Condition M12 ensure Continuous Opacity monitoring occurs. The permit requires annual stack testing under Condition M15, and Condition M16 sets the stack testing procedures. Condition M16 monitors particulate emissions by measuring Filterable PM during stack testing and is required at least once during the life of the permit and whenever requested by ORCAA. Condition AR1.29 requires oxygen analyzer monitoring to comply with CO emission requirements, Condition M10 requires NO_x monitoring and Table M2 has opacity and ESP voltage monitoring requirements. Condition M18 has requirements regarding monitoring operating load.

Condition M6 has requirements for Fuel monitoring. Sulfur from fuel combustion in the boiler contributes to sulfur dioxide emissions. Therefore, the permittee is required to determine the average sulfur content of all non-gaseous fuels combusted in the boiler if combusting anything other than natural gas, propane, “clean hog fuel”, or when requested by ORCAA.

Condition AR1.26 has requirements detailing a startup/shutdown monitoring plan.

8.2 Monitoring Associated with Lumber Drying

There are no unique monitoring requirements for the lumber drying operations. The facility is subject to a 350 million board feet limit of dimensional green lumber, of which 315 million board feet may be kiln-dried. RK1 requires all records be kept, which is sufficient for monitoring purposes.

8.3 Monitoring Associated with the Planer Mill

The Planer Mill baghouses are subject to CAM. Condition M9 and the associated Table M1 specifies the allowable pressure drop measured by the Magnahelics continuously monitoring the pressure drop in the Clarke and Carter Day baghouses controlling the dust collection system for the Planer Mill.

8.4 Monitoring Associated with Sawmill

The Sawmill baghouse is subject to CAM. Condition M9 and the associated Table M1 specifies the allowable pressure drop measured by the Magnahelic continuously monitoring the pressure drop in the Superior Systems baghouses controlling the dust collection system for the Sawmill.

8.5 Monitoring Associated with Hog Fuel System

The Hog Fuel System baghouse is subject to CAM. Condition M9 and the associated Table M1 specifies the allowable pressure drop measured by the Magnahelic continuously monitoring the pressure drop in the Clarke baghouse controlling the dust collection system for the Hog Fuel System.

9.0 Regulatory Basis

Table 9.1 provides the regulatory basis for each permit condition as required by WAC 173-401-600(2) and §70.6(a)(1).

Table 9.1: Basis and Authority of AOP Conditions

#	Description	Origin	Authority
P1	Permit Duration	WAC 173-401-610	WAC 173-401-600(1)(b)
P2	Federally Enforceable Requirements	WAC 173-401-625	WAC 173-401-600(1)(b)
P3	Compliance Maintenance	WAC 173-401-630(3) WAC 173-401-510(2)(h)(iii)	WAC 173-401-600(1)(b)
P4a	Standard Conditions: Duty to comply	WAC 173-401-620(2)(a)	WAC 173-401-620(2)
P4b	Standard Conditions: Need to Halt or Reduce Activity Not a Defense	WAC 173-401-620(2)(b)	WAC 173-401-620(2)
P4c	Standard Conditions: Permit Actions	WAC 173-401-620(2)(c)	WAC 173-401-620(2)
P4d	Standard Conditions: Property Rights	WAC 173-401-620(2)(d)	WAC 173-401-620(2)
P4e	Standard Conditions: Duty to Provide Information	WAC 173-401-620(2)(e)	WAC 173-401-620(2)
P4f	Standard Conditions: Annual Fees	WAC 173-401-620(2)(f)	WAC 173-401-620(2)
P4g	Standard Conditions: Emission Trading	WAC 173-401-620(2)(g)	WAC 173-401-620(2)
P4h	Standard Conditions: Severability	WAC 173-401-620(2)(h)	WAC 173-401-620(2)
P4i	Standard Conditions: Permit Appeals	WAC 173-401-620(2)(i)	WAC 173-401-620(2)
P4j	Standard Conditions: Permit Continuation	WAC 173-401-620(2)(j)	WAC 173-401-620(2)
P5	Duty to Supplement of Correct Application	WAC 173-401-500(6)	WAC 173-401-600(1)(b)
P6	False or Misleading Statements	WAC 173-400-105(6) ORCAA 7.2 (state/local only)	WAC 173-401-600(1)(b)
P7	Permit Renewal Application	WAC 173-401-710(1)	WAC 173-401-600(1)(b)
P8	Permit Expiration – Application Shield	WAC 173-401-710(3)	WAC 173-401-600(1)(b)
P9	Permit Revocation	WAC 173-401-710(4)	WAC 173-401-600(1)(b)
P10	Reopening for Cause	WAC 173-401-730	WAC 173-401-600(1)(b)
P11	Changes not Requiring Permit Revision/Off Permit Changes	WAC 173-401-722 WAC 173-401-724	WAC 173-401-600(1)(b)
P12	Administrative Permit Amendments	WAC 173-401-720	WAC 173-401-600(1)(b)
P13	Permit Modifications	WAC 173-401-725	WAC 173-401-600(1)(b)
P14	Greenhouse Gas Reporting Fee	WAC 173-441-110 (State only)	WAC 173-401-600(1)(b)
P15	Confidential Information	WAC 173-401-500(5) ORCAA Rule 1.6 (local only) WAC 173-401-630(1)	WAC 173-401-600(1)(b)
P16	Credible Evidence	40 CFR 51.212 40 CFR 52.12 40 CFR 52.33 40 CFR 61.12	WAC 173-401-600(1)(a)
P17	Emergency as Affirmative Defense	WAC 173-401-645	WAC 173-401-600(1)(b)
P18	Unavoidable Excess Emissions Excused	WAC 173-400-107(6) ORCAA 8.7(c) (local only)	WAC 173-401-600(1)(b)
P19	Unavoidable Excess Emissions Excused	WAC 173-400-109 ORCAA 8.7(c) (local only)	WAC 173-401-600(1)(b)
P20	Certification	WAC 173-401-520 WAC 173-401-615(3)(a) WAC 173-401-630(1)	WAC 173-401-600(1)(b)
P21	Boiler MACT Administrative Provisions	40 CFR 63.7495(h)	WAC 173-401-600(1)(a); WAC 173-401-605(1)
G1	Inspection and Entry	WAC 173-401-630(2)	WAC 173-401-600(1)(b)
G2	Access for Inspection	ORCAA 1.5(e) (local only)	WAC 173-401-600(1)(b)

G3	Insignificant Emission Units	WAC 173-401-530	WAC 173-401-600(1)(b)
G4	New Source Review	ORCAA 6.1 (local only) WAC 173-400-110	WAC 173-401-600(1)(b)
G5	Replacement or Substantial Alteration of Existing Control Equipment	ORCAA 6.1.10 (local only)	WAC 173-401-600(1)(b)
G6	Temporary Portable Sources	WAC 173-401-635 ORCAA 6.1.1	WAC 173-401-600(1)(b)
G7	Demolition and Asbestos Projects	ORCAA 6.3.2 (local only)	WAC 173-401-600(1)(b)
G8	Demolition and Renovation Projects	40 CFR Part 61, Subpart M	WAC 173-401-600(1)(a)
G9	Protection of Stratospheric Ozone	40 CFR Part 82, Subparts B & F	WAC 173-401-600(1)(a)
G10	Prohibition of Emissions Detrimental to Persons or Property	WAC 173-400-040(6) (State/local only) ORCAA 7.6 (local only)	WAC 173-401-600(1)(b)
G11	Concealment and Masking Prohibited	WAC 173-400-040(8) (State/local only); ORCAA 7.5 (local only)	WAC 173-401-600(1)(b)
G12	Circumvention	40 CFR 60.12	WAC 173-401-600(1)(a)
PW1	Fallout Prohibition	WAC 173-400-040(3) ORCAA 8.3(e) (local only)	WAC 173-401-600(1)(b)
PW2	Odor Control (State/ ORCAA)	WAC 173-400-040(5) (state only) ORCAA 8.5(a) (local only)	WAC 173-401-600(1)(b)
PW3	Odor Prohibition	ORCAA 8.5(c) (local only)	WAC 173-401-600(1)(b)
PW4	Fugitive Emissions Control	WAC 173-400-040(4)(a)	WAC 173-401-600(1)(b)
PW5	Fugitive Dust Control	WAC 173-400-040(9)(a) ORCAA 8.3(c) (local only)	WAC 173-401-600(1)(b)
PW6	Maintenance and Repair of Air Pollution Control Equipment and Processes	ORCAA 8.8 (local only)	WAC 173-401-600(1)(b)
PW7	General Standards for Maximum Visual Emissions	ORCAA 8.2 (local only)	WAC 173-401-600(1)(b) WAC 173-401-605(1)
PW8	Visible emissions	WAC 173-400-040(2)	WAC 173-401-600(1)(b) WAC 173-401-605(1)
PW9	Sulfur Dioxide	WAC 173-400-040(7)	WAC 173-401-600(1)(b) WAC 173-401-605(1)
PW10	General Particulate Standards for Combustion Units (State)	WAC 173-400-050(1) ORCAA 8.3(a) (local only)	WAC 173-401-600(1)(b) WAC 173-401-605(1)
PW11	General Particulate Standards for Combustion Units (ORCAA)	ORCAA 8.3(a) & (b) (local only)	WAC 173-401-600(1)(b) WAC 173-401-605(1)
PW12	General Emission Standards for Process Units	WAC 173-400-060 ORCAA 8.3(a) (local only)	WAC 173-401-600(1)(b) WAC 173-401-605(1)
AR1.1	Sulfur Dioxide Limit, WAC	WAC 173-400-040(7)	WAC 173-401-600(1)(b)
AR1.2	Particulate Limit, WAC	WAC 173-400-050(1)	WAC 173-401-600(1)(b)
AR1.3	Particulate Limit, ORCAA Regulations	ORCAA 8.3(b) (local only)	WAC 173-401-600(1)(b)
AR1.4	Particulate Limit, NOC	95NOC646 Condition 3	WAC 173-401-600(1)(c)
AR1.5	Opacity Limit, ORCAA Regulations	ORCAA 8.2 (local only)	WAC 173-401-600(1)(b)
AR1.6	Visible emissions	WAC 173-400-040(2) WAC 173-400-070(2)(a)	WAC 173-401-600(1)(b)
AR1.7	Opacity Limit, NOC	95NOC646 Condition 4	WAC 173-401-600(1)(c)
AR1.8	Particulate Limit, Subpart Db	40 CFR 60.43b(c)(1) 40 CFR 60.43b(g) 40 CFR 60.46b(a) 40 CFR 60.46b(d)(1)-(6) 40 CFR 60.8	WAC 173-401-600(1)(a)
AR1.9	Opacity Limit, Subpart Db	40 CFR 60.43b(f) 40 CFR 60.11(c)	WAC 173-401-600(1)(a)

		40 CFR 60.43b(f, g) 40 CFR 60.46b(a) 40 CFR 60.46b(d)(7) 40 CFR 60.11(e)(3) 40 CFR 60.8	
AR1.10	Subpart Db Concealment Prohibition	40 CFR 60.12 40 CFR 63.4(b)	WAC 173-401-600(1)(a)
AR1.11	NOx Limit	95NOC646 Condition #5	WAC 173-401-600(1)(c)
AR1.12	CO Limit	95NOC646 Condition #6	WAC 173-401-600(1)(c)
AR1.13	Fuel Specifications	01NOC110 Condition #12	WAC 173-401-600(1)(c)
AR1.14	O&M Plan	95NOC646 Condition #9	WAC 173-401-600(1)(c)
AR1.15	Subpart Db Operation and Maintenance Requirement	40 CFR 60.11(d)	WAC 173-401-600(1)(a)
AR1.16	Regulation 8 Operation and Maintenance Requirement	ORCAA 8.8 (local only)	WAC 173-401-600(1)(b)
AR1.17	Compliance Assurance Monitoring for EU1	40 CFR Part 64	WAC 173-401-615(1)(a)
AR1.18	Required Opacity Records for Boiler	40 CFR 60.49b(f)	WAC 173-401-615(2)
AR1.19	Required Excess Emission Reports	40 CFR Part 60 40 CFR 60.49b(h) 95NOC646 Condition 10	WAC 173-401-600(1)(a) WAC 173-401-615(3)
AR1.20	Boiler Record Retention	40 CFR Part 60 40 CFR 60.49b(o)	WAC 173-401-615(2)
AR1.21	Boiler Hydrogen Chloride (HCL) Emission Limit (Part 63)	40 CFR 63.7500(a)(1) Item 1a of Table 2 to Subpart DDDDD of Part 63 40 CFR 63.7500(f) 40 CFR 63.7505(a),(c) 40 CFR 63.7540(a)	WAC 173-401-600(1)(a)
AR1.22	Boiler Mercury Emission Limit (Part 63)	40 CFR 63.7500(a)(1) Item 1b of Table 2 to Subpart DDDDD of Part 63 40 CFR 63.7500(f) 40 CFR 63.7505(a),(c) 40 CFR 63.7540(a)	WAC 173-401-600(1)(a)
AR1.23	Boiler Carbon Monoxide (CO) Emission Limit (Part 63)	40 CFR 63.7500(a)(1) Item 12a of Table 2 to Subpart DDDDD of Part 63 40 CFR 63.7500(f) 40 CFR 63.7505(a),(c) 40 CFR 63.7540(a)	WAC 173-401-600(1)(a)
AR1.24	Boiler Filterable PM Emission Limit (Part 63)	40 CFR 63.7500(a)(1) Item 12b of Table 2 to Subpart DDDDD of Part 63 40 CFR 63.7500(f) 40 CFR 63.7505(a),(c) 40 CFR 63.7540(a)	WAC 173-401-600(1)(a)
AR1.25	Boiler Tune-Up	a. 40 CFR 63.7540(a)(10) b. 40 CFR 63.7540(a)(10)(i) c. 40 CFR 63.7540(a)(10)(ii) d. 40 CFR 63.7540(a)(10)(iii) e. 40 CFR 63.7540(a)(10)(iv) f. 40 CFR 63.7540(a)(10)(v) g. 40 CFR 63.7540(a)(10)(vi) h. 40 CFR 63.7540(a)(13)	WAC 173-401-600(1)(a)

AR1.26	Boiler MACT Requirements for Startup and Shutdown (EU1)	40 CFR 63.7500(a)(1) 40 CFR 63.7500(f) 40 CFR 63.7505(e) 40 CFR 63.7530(h) 40 CFR 63.7555(d) Table 3 to Subpart DDDDD of Part 63	WAC 173-401-600(1)(a) WAC 173-401-605(1)
AR1.27	Establishing Boiler MACT Operating Limits (EU1)	40 CFR 63.7510(a)(3) 40 CFR 63.7530(b) Table 7 to Subpart DDDDD of Part 63	WAC 173-401-600(1)(a) WAC 173-401-605(1)
AR1.28	Boiler MACT Operating Limits	40 CFR Part 63 40 CFR 63.7500(a)(2) Items 7 and 8 of Table 4 to Subpart DDDDD of Part 63 Items 1, 9 and 10 of Table 8 to Subpart DDDDD of Part 63 40 CFR 63.7540(a)	WAC 173-401-600(1)(a)
AR1.29	Oxygen Analyzer System	40 CFR Part 63 40 CFR 63.7525(a)	WAC 173-401-615(1)(c)
AR1.30	Opacity Monitor	95NOC646 Condition 8	WAC 173-401-600(1)(c)
AR2.1	General Particulate Standards for Process and Combustion Units	ORCAA 8.3 (local only)	WAC 173-401-600(1)(b)
AR2.2	General Emission Standards for Process Units	WAC 173-400-060	WAC 173-401-600(1)(b)
AR2.3	Opacity Limit, ORCAA Regulations	ORCAA 8.2 (local only)	WAC 173-401-600(1)(b)
AR2.4	Opacity Limit, WAC	WAC 173-400-040(2)	WAC 173-401-600(1)(b)
AR2.5	Regulation 8 Operation and Maintenance Requirement	ORCAA 8.8 (local only)	WAC 173-401-600(1)(b)
AR3.1	General Particulate Standards for Process and Combustion Units	ORCAA 8.3(a) (local only)	WAC 173-401-600(1)(b)
AR3.2	General Emission Standards for Process Units	WAC 173-400-060	WAC 173-401-600(1)(b)
AR3.3	Particulate Limit, Clark Baghouse	94NOC553 Condition 4c	WAC 173-401-600(1)(c)
AR3.4	Opacity Limit, ORCAA Regulations	ORCAA 8.2 (local only)	WAC 173-401-600(1)(b)
AR3.5	Opacity Limit, WAC	WAC 173-400-040(2)	WAC 173-401-600(1)(b)
AR3.6	Opacity Limit, Clarke Baghouse (#1)	94NOC553 Condition 4c	WAC 173-401-600(1)(c)
AR3.7	Opacity Limit, Carter Day Baghouse (#2)	96NOC031 Condition 3	WAC 173-401-600(1)(c)
AR3.8	Opacity Limit, Package Saw Baghouse	98NOC009 Condition 2	WAC 173-401-600(1)(c)
AR3.9	Operations and Maintenance Plan Requirement	94NOC553 Condition 8 96NOC031 Condition 5	WAC 173-401-600(1)(c)
AR3.10	Regulation 8 Operation and Maintenance Requirement	ORCAA 8.8 (local only) 95NOC553 Condition 4a 96NOC031 Condition 5	WAC 173-401-600(1)(b and c)
AR3.11	Planer Baghouse Pressure Monitor Requirement	95NOC533 Condition 4b	WAC 173-401-600(1)(c)
AR3.12	Cyclone Requirements	95NOC533 Condition 5	WAC 173-401-600(1)(c)
AR3.13	Shavings Truck Bin Cyclone Requirements	95NOC533 Condition 6	WAC 173-401-600(1)(c)
AR3.14	Truck Bin Requirements	95NOC533 Condition 7	WAC 173-401-600(1)(c)
AR3.15	Visible Emissions	96NOC031 Condition 4	WAC 173-401-600(1)(c)
AR3.16	Opacity Limit, Powerhouse Baghouse	06NOC467 Condition 2	WAC 173-401-600(1)(c)
AR4.1	General Particulate Standards for Process and Combustion Units	ORCAA 8.3(a) (local only)	WAC 173-401-600(1)(b)

AR4.2	General Emission Standards for Process Units	WAC 173-400-060	WAC 173-401-600(1)(b)
AR4.3	Opacity Limit, ORCAA Regulations	ORCAA 8.2 (local only)	WAC 173-401-600(1)(b)
AR4.4	Opacity Limit, WAC	WAC 173-400-040(2)	WAC 173-401-600(1)(b)
AR4.5	Opacity Limit, sawmill Baghouse	98NOC004 Condition 2	WAC 173-401-600(1)(c)
AR4.6	Regulation 8 Operation and Maintenance Requirement	ORCAA 8.8 (local only)	WAC 173-401-600(1)(b)
AR5.1	General Particulate Standards for Process and Combustion Units	ORCAA 8.3 (local only)	WAC 173-401-600(1)(b)
AR5.2	General Emission Standards for Process Units	WAC 173-400-060	WAC 173-401-600(1)(b)
AR5.3	Opacity Limit, ORCAA Regulation 8	ORCAA 8.2 (local only)	WAC 173-401-600(1)(b)
AR5.4	Opacity Limit, WAC	WAC 173-400-040(2)	WAC 173-401-600(1)(b)
AR5.5	Regulation 8 Operation and Maintenance Requirement	ORCAA 8.8 (local only)	WAC 173-401-600(1)(b)
AR5.6	Compliance Assurance Plan	06NOC467 Condition 3	WAC 173-401-600(1)(c)
AR5.7	Cyclone #11 Visual Emissions	15NOC1130 Condition 2	WAC 173-401-600(1)(c)
AR5.8	Operation and Maintenance Plan	15NOC1130 Condition 3	WAC 173-401-600(1)(c)
AR5.9	Required Records	15NOC1130 Condition 4	WAC 173-401-600(1)(c)
M1	Opacity Surveys	N/A - gap filling monitoring	WAC 173-401-615(1)(b)
M2	Compliance Demonstration Required	N/A - gap filling monitoring	WAC 173-401-615(1)(b)
M3	Opacity Reading Procedures	N/A - gap filling monitoring	WAC 173-401-615(1)(b)
M4	Complaint Monitoring	N/A - gap filling monitoring	WAC 173-401-615(1)(b)
M5	GHG Monitoring Requirements	Chapter 173-441 WAC (<i>State only</i>)	WAC 173-401-615(1)(a)
M6	Sulfur Dioxide Emissions Monitoring	N/A - gap filling monitoring	WAC 173-401-615(1)(b)
M7	General Source Testing Procedures and Methods	ORCAA 1.5(j) (local only)	WAC 173-401-615(1)(c)
M8	Fugitive Emissions and Dust Control Monitoring	N/A - gap filling monitoring	WAC 173-401-615(1)(b)
M9	Pollution Control Equipment Monitoring	WAC 173-401-615(3)(a) 95NOC553 Condition 9	WAC 173-401-615(1)(b) WAC 173-401-600(1)(a,b,c) WAC 173-401-615(4)
M10	EU1, NOx Monitoring	95NOC646 Condition 5	WAC 173-401-615(1)(b)
M11	Soot Blowing/Grate Cleaning	WAC 173-400-040(2)(a) ORCAA 8.2(c)(1)	WAC 173-401-600(1)(b)
M12	EU1 Continuous Opacity Monitoring	a. 40 CFR 60.13(d)(1) b. 40 CFR 60.48b c. 40 CFR 60.13(d)(2) 40 CFR 63.8(c)(5) d. 40 CFR 60.13(e)(1) 40 CFR 63.8(c)(4) e. 40 CFR 60.13(f) 40 CFR 63.8(c)(2)(i) f. 40 CFR 63.8(c) g. 40 CFR 63.8(c)(2)(ii) h. 40 CFR 63.8(c)(3) i. 40 CFR 63.8(d)(2) j. 40 CFR 63.7535(b,c,d) k. 40 CFR 63.7525(c)	WAC 173-401-600(1)(a) WAC 173-401-600(1)(c) WAC 173-401-615(1)(c)
M13	Performance Evaluation of CMS	1. 40 CFR 63.8(e)(1) 2. 40 CFR 63.8(e)(4)	WAC 173-401-615(1)(c)
M14	Site-specific Monitoring Plan	a. 40 CFR 63.7505(d)(1) b. 40 CFR 63.7505(d)(1)(i) c. 40 CFR 63.7505(d)(1)(ii)	WAC 173-401-615(1)(c) WAC 173-401-615(1)(b)

		d. 40 CFR 63.7505(d)(2)(i) e. 40 CFR 63.7505(d)(2)(ii) f. 40 CFR 63.7505(d)(2)(iii) g. 40 CFR 63.7505(d)(3) h. 40 CFR 63.7505(d)(4) i. WAC 173-441-050(6)(d)	
M15	Ongoing Compliance Demonstration	a. 40 CFR 63.7515(a) 95NOC646 Condition 6 b. 40 CFR 63.7515(b) c. 40 CFR 63.7515(c) d. 40 CFR 63.7515(g) e. 40 CFR 63.7515(i) f. 40 CFR 63.7515(f) g. 40 CFR 63.7515(d) h. 40 CFR 63.7530(b)	WAC 173-401-615(1)(a)
M16	Stack Testing Procedures	a. 40 CFR 63.7520(a) b. 40 CFR 63.7520(a); 40 CFR 63.7(c)(2),(i) c. 40 CFR 63.7520(a) 40 CFR 63.7(c)(2)(ii) d. 40 CFR 63.7520(a) 40 CFR 63.7(c)(2)(iii) e. 40 CFR 63.7520(a) 40 CFR 63.7(d) f. 40 CFR 63.7520(a) g. 40 CFR 63.7520(b)] h. 40 CFR 60.46b(d) i. 40 CFR 63.7520(c) j. 40 CFR 63.7520(c) k. 40 CFR 63.7520(d) 40 CFR 63.7(e)(3) l. 40 CFR 63.7520(d) m. 40 CFR 63.7520(e) n. 40 CFR 63.7520(e) o. 40 CFR 60.46b(d)(7) p. 40 CFR 63.7520(f) q. 40 CFR 63.7520(a) 40 CFR 63.7(f) r. 40 CFR 63.7520(a) 40 CFR 63.7(h)	WAC 173-401-615(1)(a)
M17	Site-specific Stack Test Plan	40 CFR 63.7520(b) 40 CFR 63.7(c)	WAC 173-401-615(1)(a)
M18	Steam Production Monitoring for EU1	a. 40 CFR 63 Subpart DDDDD; Item 5 of Table 7 b. WAC 173-401-615(1)(b); 40 CFR 70.6(c)(1) c. WAC 173-401-615(1)(b); 40 CFR 70.6(c)(1) d. WAC 173-401-615(1)(b); 40 CFR 70.6(c)(1)	WAC 173-401-615(1) (a,b); 40 CFR 70.6(c)(1)
RK1	Retention and Availability of Records	WAC 173-401-615(2)(c) 40 CFR 60.7(f) 40 CFR 60.48(c)(i)	WAC 173-401-615(2)
RK2	Record of Changes	WAC 173-401-615 (2)(b) WAC 173-401-724(5)	WAC 173-401-615(2)

RK3	General Requirements for Monitoring Records	WAC 173-401-615 (2)(a)	WAC 173-401-615(2)
RK4	Record of Permit Deviations	WAC 173-401-615(3)(b) 40 CFR 64.9(b)(2)	WAC 173-401-615(2)
RK5	Display of Orders, Certificates and Other Notices	ORCAA 7.4 (local only) 01NOC192 Condition 9 15NOC1130 Condition 4	WAC 173-401-615(2)
RK6	Availability of Emissions Records	ORCAA 8.11 (local only)	WAC 173-401-615(2)
RK7	Emissions Records	WAC 173-400-105(1) ORCAA 8.11(a) (local only)	WAC 173-401-615(2)
RK8	Unlawful Reproduction or Alteration of Documents	ORCAA 7.3 (local only)	WAC 173-401-615(2)
RK9	Records of Complaints	WAC 173-401-615(2)(a)	WAC 173-401-615(2)
RK10	Record of Actions Taken to Maintain Air Pollution Control Equipment	WAC 173-401-615(2)(a)	WAC 173-401-615(2)
RK11	Paperless Records	WAC 173-401-615(2)(a) 40 CFR 64.9(b)(2)	WAC 173-401-615(2)
RK12	MACT Applicability Records	40 CFR 63.1(b)(3) 40 CFR 63.10(b)(3)	WAC 173-401-615(2)
RK13	Records Required for Greenhouse Gas (GHG) Reporting	WAC 173-441-050(6) (state only)	WAC 173-401-615(2)
RK14	Startup Shutdown Malfunction	40 CFR 60.7(b) 40 CFR 63.10(b)	WAC 173-401-615(2)
RK15	Boiler Records	40 CFR 63.7540(a)(ii)	WAC 173-401-615(2)
RK16	Boiler tune-Up Records	40 CFR 63.7540(a)(10)(vi)(a-c) 40 CFR 63.7540(a)(12)	WAC 173-401-615(2)
RK17	Subpart DDDDD Recordkeeping	a. 40 CFR 63.7555(a)(1) b. 40 CFR 63.7555(b) c. 40 CFR 63.7555(c) d. 40 CFR 63.7555(d) 40 CFR 63.10(b)(2)(iii) 40 CFR 63.10(b)(2)(x) 40 CFR 63.10(b)(2)(xi) 40 CFR 63.10(c)(1-9 & 13-15)	WAC 173-401-615(2)
RK18	Records Retention	40 CFR 63.7560(a-c) 40 CFR 63.10(b)	WAC 173-401-615(2)
RK19	Recordkeeping Requirements	40 CFR 63.7560	WAC 173-401-615(2)
RK20	Required Records	06NOC467 Conditions 4, 5 (Powerhouse Baghouse) Other baghouses: Gap-filling	WAC 173-401-600(1)(c) WAC 173-401-615(2)
RK21	Required Records	ORCAA 8.11 (local only)	WAC 173-401-615(2)
RK22	Required Records	ORCAA 8.11 (local only)	WAC 173-401-615(2)
R1	Certification of Reports	WAC 173-401-630(1) WAC 173-401-520 WAC 173-401615(3)(a) 40 CFR 63.2520(e)(2)	WAC 173-401-615(3)
R2	Annual Compliance Certification	WAC 173-401-630(5)	WAC 173-401-615(3)
R3	Confidential Information	ORCAA 1.6 (local only)	WAC 173-401-615(3)
R4	Semi-Annual Monitoring Reports	WAC 173-401-615(3)(a) 40 CFR 60.49(b)(w) 40 CFR 60.7(c,d) 40 CFR 63.7550(b) 40 CFR 64.9(a)	WAC 173-401-615(3)

R5	Reporting Deviations from Permit Conditions	WAC 173-401-615(3)(b) WAC 173-400-107(3) WAC 173-401-645 WAC 173-401-615(1)(a)	WAC 173-401-615(3)
R6	Notification of Emergencies	a. WAC 173-401-645(3)(d) 173-401-615(3)(b) b. WAC 173-401-645(3)(d) c. WAC 173-401-645(3)(d) d. WAC 173-401-645(3)(d)	WAC 173-401-615(3)
R7	Washington Requirements for Excess Emissions Reporting (WAC 173-400-107)	WAC 173-400-107	WAC 173-401-615(3)
R8	Washington Requirements for Excess Emissions Reporting (WAC 173-400-108)	WAC 173-400-108	WAC 173-401-615(3) (State only)
R9	Notification of Control Equipment Malfunction	Condition M9	WAC 173-401-615(3)
R10	Notification of Need for Improved Monitoring of Emissions Units Subject to CAM	40 CFR 64.7(e)	WAC 173-401-615(3)
R11	Notification of Complaint Received	WAC 173-401-615(2)	WAC 173-401-615(3)
R12	Annual Inventory Report	WAC 173-400-105(1) ORCAA 8.11 (local only) WAC 173-401-615(1)(a)	WAC 173-401-615(3)
R13	Notification of Performance Testing	WAC 173-401-630(1) 40 CFR 63.7545(d) 40 CFR 63.9(e)	WAC 173-401-615(3)
R14	Reporting Results of Performance Testing	WAC 173-401-630(1) WAC 173-401-615(1)(a) 40 CFR 63.10(d)(2) 40 CFR 63.7515(d) 40 CFR 63.7550	WAC 173-401-615(3)
R15	EPA Notification	40 CFR 60.4(a) 40 CFR 63.10(a)(4)	WAC 173-401-615(3)
R16	Deviation Reports	40 CFR 63.7540(b)	WAC 173-401-615(3)
R17	Notification Reporting	40 CFR 63.7545(a) 40 CFR 63.4(a) 40 CFR 63.8 40 CFR 63.9	WAC 173-401-615(3)
R18	Compliance Reporting	40 CFR 63.7550(a)	WAC 173-401-615(3)
R19	Report Timing	40 CFR 63.7550(b)	WAC 173-401-615(3)
R20	SAMR- Boiler MACT	40 CFR 63.7550(b-e) 40 CFR 63.8	WAC 173-401-615(3)
R21	Subpart DDDDD Reporting	40 CFR 63.7550(h) 40 CFR 63.8(e)(5) 40 CFR 63.10(e)(2)(i) 40 CFR 63.10(e)(4)	WAC 173-401-615(3)
R22	Excess Emissions and Continuous Monitoring System Performance Report and Summary Report	40 CFR 63.10(e)(3)	173-401-615(3)
R23	State Greenhouse Gas (GHG) Reporting	Chapter 173-441 WAC (State only)	WAC 173-401-615(3)
S1	Permit Shield	N/A	WAC 173-401-640(1)
S2	Inapplicable or Exempt Requirements	N/A	WAC 173-401-640(2)
S3	Exclusions	N/A	WAC 173-401-640(4)

APPENDIX A

Data Summary

Name: Weyerhaeuser NR Raymond Lumbermill

Physical address: 51 Ellis St, Raymond WA 98577

County: Pacific

Primary Contact: Nancy Wood Siglin

Contact phone number: 360 942-6305

Air Operation Permit #: 04AOP387

EIS #: 7045211

FRS #: 110001916516

ICIS-AIR #: WAORC0005304900004

Type of ownership: private

Operating status: operating

NAICS code: 321113

SIC code(s): 2421

Air program(s): MACT, NSPS, SIP, Title 5 *(list all that apply-Title 5, SIP, NSPS, NESHAP Part 61, PSD, FESOP(SM), MACT Part 63, Acid Precipitation, NSR, and a few others)*

Subparts:

-40 CFR Part 60, Subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

-40 CFR Part 63, Subpart DDDD: National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (applicable, but no requirements)

-40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (The Boiler MACT)

Major for which pollutant(s)?: Acetaldehyde, Methanol, CO, NOx, VOCs

Class: Major