LANE REGIONAL AIR PROTECTION AGENCY
TITLE V OPERATING PERMIT
REVIEW REPORT

1010 Main St.
Springfield, OR 97477

Source Information:

Primary SIC	2436
Secondary SIC	4961
Primary NAICS	321212
Secondary NAICS	221330

Source Category (LRAPA Title 37, Table 1)	B.57: Plywood manufacturing and/or veneer drying
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	Y
Emission credits	NA
Compliance schedule	NA
Source test date	EU-1 (One year prior to permit expiration date)

COMS	NA
CEMS	NA
Ambient monitoring	NA

Reporting Requirements

Annual report (due date)	February 15th
Emission fee report (due date)	February 15th
Semi-Annual Report (due date)	August 15th
Greenhouse Gas (due date)	March 31st

Monthly report (due dates)	NA
Quarterly report (due dates)	NA
Excess emissions report	Immediately
Other reports	NA

Air Programs

NSPS (list subparts)	NA
NESHAP (list subparts)	A, JJJJJJ, ZZZZ
CAM	Y
Regional Haze (RH)	NA
Synthetic Minor (SM)	Y
Part 68 Risk Management	NA
Title V	Y
Part 68 Risk Management	NA
ACDP (SIP)	NA

Major HAP source	NA
Federal major source	Y
New Source Review (NSR)	NA
Prevention of Significant Deterioration (PSD)	NA
Acid Rain	NA
Clean Air Mercury Rule (CAMR)	NA
TACT	NA
>20 Megawatt	NA

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT

ACDP	Air Contaminant Discharge Permit
Act	Federal Clean Air Act
ASTM	American Society of Testing and Materials
BDT	Bone dry ton
BDU	Bone dry unit
BF	Board feet
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPMS	Continuous parameter monitoring system
Day	A calendar 24-hour period
DEQ	Department of Environmental Quality
dscf	Dry standard cubic feet
EF	Emission factor
ERC	Emission Reduction Credit
EPA	US Environmental Protection Agency
EPI	Epichlorohydrin
EU	Emissions Unit
FCAA	Federal Clean Air Act
FSA	Fuel sampling and analysis
GHG	Greenhouse Gas
gr/dscf	Grain per dry standard cubic foot (1 pound=7000 grains)
HAP	Hazardous Air Pollutant as defined by OAR 244-0040
HCFC	Halogenated Chloro-Fluoro-Carbon
HCOH	Formaldehyde
ID	Identification number
I&M	Inspection and maintenance
LRAPA	Lane Regional Air Protection Agency
M	1,000
MM	1,000,000
Month	Calendar month
MB	Material Balance
MBF	1,000 Board feet
MSF	1,000 Square feet 3/8” basis
MSDS	Material Safety Data Sheets
NA	Not applicable
NESHAP	National Emission Standard for Hazardous Air Pollutants
NO_x	Nitrogen oxides
NSPS	New Source Performance Standards
O_2	Oxygen
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ORS	Oregon Revised Statutes
OSHA	Occupational Safety and Health Administration
O&M	Operation and maintenance
Pb	Lead
PCD	Pollution Control Device
PM	Particulate matter
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
ppmv	Parts per million by volume
ppm	Parts per million
PSEL	Plant Site Emission Limit
psia	Pounds per square inch, actual
psig	Pounds per square inch, gauge
RMP	Risk Management Plan
RTO	Regenerative Thermal Oxidizer
SERP	Source emissions reduction plan
SO_2	Sulfur dioxide
ST	Source test
TPY	Tons per year, (short ton=2000 lbs)
UF	Urea Formaldehyde
UFC	Urea-Formaldehyde Concentrate
VE	Visible emissions
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
Week	Calendar week starting at 12:01 am on Sunday morning
Year	A period consisting of any 12-consecutive calendar months

INTRODUCTION

1. The proposed permit is a renewal of the Lane Regional Air Protection Agency (LRAPA) Title V Operating Permit No. 207510 that was issued February 26, 2016 and scheduled to expire on February 26, 2021. The existing permit will remain in effect until this renewal is issued.

   1.a. Information relied upon: The permit renewal is based upon the renewal application (No. 66086) received February 26, 2020.

2. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

FACILITY DESCRIPTION

3. The Swanson Group Mfg. LLC – Springfield Plywood/Veneer facility processes logs for the manufacture of veneer and plywood products. The activities conducted at the facility include the decking of logs, processing logs prior to peeling, peeling logs into veneer, sorting and drying veneer and manufacturing plywood and panel products. The facility has two (2) hog fuel boilers that produce steam used by the two (2) veneer dryers, five (5) plywood presses, block condition vaults, and for heat in the mill.

4. The facility is located in an area that is generally flat. To the north of the facility there is a mixed industrial, commercial, and residential area along with an active train track. To the east of the facility is a heavy industrial area, including several other wood product manufacturing facilities. To the south of the facility there is a public access bike path and a small hill utilized as a quarry. To the west of the facility there is a mixed industrial and residential area and the Willamette River.

GENERAL BACKGROUND INFORMATION

5. The facility is located inside the Eugene Springfield Air Quality Management Area. The facility is located in an area that has been designated an attainment/unclassified area for $PM_{2.5}$, O_3, NO_X, SO_2 and Pb and a maintenance area for CO and PM_{10}. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness area.

6. The current permit was issued on February 26, 2016. The following changes to the permit were made during the last permit term:

Date	Permit Revision or Notification	Explanation
06/22/2017	Addendum No. 1 (Administrative Amendment – Application No. 62849)	Amendment to change the title of the responsible official and to change the date of the source test requirement for the Plywood Presses in EU-2.
01/04/2018	Addendum No. 2 (Minor Permit Modification – Application No. 63330)	Amendment to update the PM, PM_{10}, $PM_{2.5}$, VOC, methanol, and combined HAP emission factors for the Veneer Dryers in EU-3. Updated the first semi-annual report due date from July 30 to August 15.
06/21/2018	Addendum No. 3 (Significant Permit Modification – Agency-initiated)	Amendment to update the $PM_{2.5}$ PSEL to correct for a calculation error caused by an artificially low $PM_{2.5}$ emission factor for EU-3.

Date	Permit Revision or Notification	Explanation
08/06/2018	Addendum No. 4 (Minor Permit Modification – Agency-initiated)	Amendment to update the VOC, methanol, and combined HAP emission factors for the Plywood Presses in EU-2.
09/10/2020	Addendum No. 5 (Administrative Amendment – Application No. 66353)	Amendment to change the title of the responsible official.

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

7. The emissions units at this facility are the following:

Emission Unit Description	EU ID	Pollution Control Device Description	PCD ID
Boilers	EU-1		
Boiler-1 (B-1)		Multiclone	MC-1
Boiler-2 (B-2)		Multiclone	MC-2
Plywood Presses	EU-2	None	None
Press #1 (P-1)			
Press #2 (P-2)			
Press #3 (P-3)			
Press #4 (P-4)			
Press #5 (P-5)			
Veneer Dryers	EU-3	Regenerative Thermal Oxidizer	RTO
Veneer Dryer #1 (VD-1)			
Veneer Dryer #2 (VD-2)			
Mill Equipment	EU-4		
Core Saw, Strip Saw, Raute P-2 Robot Plugger Line, Veneer Scarfer & Edge Gluer, Panel Saw, Dry Hog, Composer Hog Fines Target Box		Baghouse #1	Bag-1
Panel Sanding Line		Baghouse #2	Bag-2
Sander Dust Fuel Silo Bin Vent		Filter #3	Bag-3
Hog Fuel Bin		Cyclone #8	C-8
Fugitive Sources	EU-5	None	None
Hog Fuel Pile (VOC only)			
Chippers/Hogs (VOC only)			
Block Conditioning Vault (VOC only)			
Material Handling ($PM/PM_{10}/PM_{2.5}$)			
Aggregate Insignificant (AI) Activities	AI	None	None
Truck Load Out			
Debarkers			
Veneer Lathes			
Resin and Glue Tanks			
Categorically Insignificant Activity	CIA	None	None
Emergency Generator: 35 kW, diesel-fired			

8. Boilers (EU-1): Two (2) hog fuel boilers, capable of producing as much as 60,000 pounds of steam per hour each, supply steam to heat veneer dryers, block vats, plywood presses, and buildings. The rated heat input capacity for each boiler is 71,940,000 Btu/hour, with a maximum operating steam pressure of 200 psig and an operating steam temperature of 388 degrees Fahrenheit (˚F). Particulate matter emissions are controlled for each of the boilers with multiclones that were installed in 1968. Flyash is reinjected into the boilers after being screened to remove inorganic debris.

9. Plywood Presses (EU-2): Plywood production consists of coating the veneer with a phenol formaldehyde resin and gluing panels together. Panels are pressed in a cold press to initiate the glue bond and are then pressed in the hot presses to produce plywood panels. The production rate of plywood for the facility is set by the renewal application at 145,000 thousand square feet (MSF) per year on a ⅜-inch basis.

10. Veneer Dryers (EU-3): The veneer drying process starts with sheets of green veneer that enter a belt-driven tray and are conveyed through the production line. The green veneer proceeds down the production line to clippers that cut defects out of the veneer. Automated stackers sort full sheets while the remainder is conveyed for manual sorting. The green veneer is dried in one of two (2) steam-heated veneer dryers. The dried veneer is then sorted and manufactured into plywood, siding, sanded, underlayment, and specialty panel products according to customer demands. The production rate of veneer for the facility is set by the renewal application at 248,000 thousand square feet (MSF) per year on a ⅜-inch basis.

11. Mill Equipment (EU-4): The mill equipment is associated with the process of preparing logs for veneer and plywood production. Log processing consists of log receipt and storage, debarking, sizing, conditioning, and peeling. Logs are brought to the site on log trucks, which are unloaded and sorted on the log deck, fed up ramps and conveyed to one of two areas for debarking and block sizing depending on their diameter. The small trim ends that remain after sizing are conveyed to two chippers for grinding into chips, which are then conveyed to the chip classifier. The chip classifier sorts chips by size, where oversized chips are re-chipped, accepts are sent to the chip bin, and the fines are conveyed to the fuel bin as hog fuel.

    After the blocks are properly sized and sorted, they are conveyed to the block heating vats to condition them, prior to peeling, utilizing hot water. After the blocks are heated and softened sufficiently, they are conveyed to two (2) lathes for processing into veneer. The bark removed from the logs is conveyed to two (2) bark hogs for processing prior to conveyance to the fuel bin. Byproducts from the production lines including waste veneer, plytrim, sawdust, and sanderdust are chipped or collected at various steps in the production process and routed to the fuel bin, green chip bin, dry waste bin, or the sander dust fuel bin. Two (2) target boxes are used to collect green fines and ply trim (installed in 2016). A cyclone and baghouses are used for transferring the wood residues and for particulate matter control.

12. Fugitive Sources (EU-5): The fugitive emissions sources at the facility are associated with the handling of residual materials throughout the veneer and plywood production processes. There is an outdoor pile of a two-to-three-day supply of hog fuel, which is generated throughout the log preparation process, and is used in the boilers in EU-1. There are also fugitive emissions attributed to the green chip bin loadout, debarkers, and the veneer lathes.

13. Categorically Insignificant Activity (CIA): The facility has a diesel-fired emergency generator that is only permitted to operate during emergencies and for 100 hours of maintenance and readiness testing a year.

AGGREGATE INSIGNIFICANT ACTIVITIES

14. Aggregate insignificant emissions from activities identified in Appendix A are detailed in the following table:

Emissions Source	Pollutants (ton/yr)			
	PM	PM_{10}	$PM_{2.5}$	VOC
Truck Loadout	3.0E-03	3.0E-03	1.5E-03	NA
Log Debarkers	0.32	0.16	0.08	NA
Veneer Lathes	NA	NA	NA	0.84
Resin and Glue Tanks	NA	NA	NA	9.6E-03
Totals	**0.32**	**0.16**	**0.08**	**0.85**

15. The following is a list of condition-by-condition changes between the previous permit and the proposed permit following is a list of changes to the proposed permit:

New Permit Condition Number	Old Permit Condition Number	Description of change	Reason for change
Most	Most	Updated and corrected rule references; Replaced "shall" with "must" in most permit conditions	LRAPA rule changes, typos, etc.
Cover page	Cover page	Updated "Information Relied Upon"; Updated Responsible Official title	Application for renewal No. 66086; Administrative amendment application No. 66353
List of Abbreviations	List of Abbreviations	Revised definition of Modified EPA Method 9; Incorporated day, week, month and year definitions into list; revised capitalization	Clarity and consistency
1	1	None	None
2	2	Updated condition numbers that are LRAPA only and/or DEQ only enforceable	Rules and conditions have changed
3	3	Updated Emission Unit and Pollution Control Device Description for Mill Equipment (EU-4); Added Categorically Insignificant Emergency Generator (CIA)	Facility-provided updated information in renewal application
Facility-Wide Table	Table 1. Facility-Wide	Updated rule citations; Created "Monitoring Requirements" columns to match permit template	2018 LRAPA rule revisions; Clarity and consistency
4	4	Updated rule citation; Added paved road airborne particulate matter precautions	2018 LRAPA rule revisions
5	5	Updated fugitive emission definition; Added LRAPA rule citation	2018 LRAPA rule revisions
6	5.c.	Extracted recordkeeping requirement from list in Condition 5 to isolate as separate condition to match permit template	Clarity and consistency
7	6.a.	Extracted nuisance language from list in Condition 6; Updated rule citation	2018 LRAPA rule revisions; Clarity and consistency
8	7.a.	Extracted nuisance monitoring requirement from list in Condition 7; Added LRAPA rule citation	2018 LRAPA rule revisions; Clarity and consistency
9	6.b.	Extracted fallout requirement from list in Condition 6; Updated language	Clarity and consistency

New Permit Condition Number	Old Permit Condition Number	Description of change	Reason for change
10	--	Added monitoring requirement for Condition 9 that uses the weekly plant survey observations of Condition 5 to establish compliance	Clarity and consistency
11	--	Added applicable requirement to prevent damage or injury to persons or property	Title V permit includes all applicable requirements
--	11.a.	Removed condition since emissions masking has been included in the General Conditions	Clarity and consistency
12	12.a.	Updated monitoring requirement to include new permit Condition 11; Added rule citations	Clarity and consistency; Lacking citations
13	9	Renumbered	Clarity and consistency
14	10	Renumbered; Added rule citation	Clarity and consistency; Lacking citations
15	--	Added applicable requirement for meeting fuel oil specifications	Title V permit includes all applicable requirements
16	--	Added monitoring requirement to verify fuel oil meets the sulfur requirements of Condition 15	Title V permit includes all applicable requirements
17	8	Renumbered	Clarity and consistency
18	13	Updated condition language; Changed emission rate based on renewal application; Updated LRAPA rule citation	Clarity and consistency; Renewal application included updated production rate of 82 Msf/hr on ⅜″-basis; 2018 LRAPA rule revisions
19	14	Updated condition language; Changed emission rate based on renewal application; Included LRAPA rule citation	Clarity and consistency; Updated information in renewal application; Lacking citation
EU-1 Emissions Limit Table	Table 2. Boiler-1 and Boiler-2	Updated rule citations; Updated grain loading standard; Included CAM condition number	2018 LRAPA rule revisions; Clarity and consistency
20	15	Removed opacity requirement prior to December 31, 2019; Included LRAPA rule citations	Past previous compliance date; 2018 LRAPA rule revisions
21	16	Minor language updates; Included rule citations	Clarity and consistency; Lacking citations
22	16.b.	Extracted recordkeeping requirement from Condition 16; Included rule citations	Clarity and consistency; Lacking citations
23	17	Removed grain loading requirement prior to December 31, 2019; Included LRAPA rule citation	Past previous compliance date; 2018 LRAPA rule revisions
24	18	Changed testing date to “once during the permit term”; Minor language updates; Included LRAPA citation	Clarity and consistency; Lacking citations
25	19	Established action levels that reflect the oxygen concentrations from the most recent source test; Included rule citations	Clarity and consistency; Lacking citations
26	19.c.	Extracted the recordkeeping requirement from Condition 19; Included rule citation	Clarity and consistency; Lacking citations

New Permit Condition Number	Old Permit Condition Number	Description of change	Reason for change
27	21	Minor language changes; Updated LRAPA citation	Clarity and consistency; 2018 LRAPA rule revisions
28	22	NESHAP JJJJJJ: Updated conditions for which the requirement has already been met and included date of compliance	Initial compliance notification dates have passed, and requirements have been met
29	25.c.	Included text from the rule since previously incorporated by reference	Title V permit includes all applicable requirements
30	23	Minor language updates; Included additional rule citations	Clarity and consistency
31	25	Inserted reporting requirements before recordkeeping to align with NESHAP rule organization; Minor language updates; Included additional rule citations	Clarity and consistency
32	24	Inserted recordkeeping requirements after reporting to align with NESHAP rule organization; Minor language updates; Included additional rule citations	Clarity and consistency
33	25.b.	None	None
EU-2 Emissions Limit Table	Table 3. Plywood Presses	Updated rule citations	2018 LRAPA rule revisions
34	26	Updated rule citation	2018 LRAPA rule revisions
35	27 & 28.a.	Combined testing condition into the monitoring condition; Updated citations	Clarity and consistency; 2018 LRAPA rule revisions
36	28.b	Extracted from Condition 28 to make separate recordkeeping requirement; Included rule citation	Clarity and consistency
37	29	Updated rule citation	2018 LRAPA rule revisions
--	30	Deleted language regarding no testing requirements	Condition deemed as informational only
38	31	Minor language updates; Included LRAPA rule citation	Clarity and consistency; Lacking citations
EU-3 Emissions Limit Table	Table 4. Veneer Dryers	Updated rule citations	2018 LRAPA rule revisions
39	32	Minor language updates and condition reorganization; Updated LRAPA rule citations	Clarity and consistency; 2018 LRAPA rule revisions
40	33 & 34(a-c)	Combined testing condition into the monitoring condition; Updated citations	Clarity and consistency; 2018 LRAPA rule revisions
41	34.d.	Extracted from Condition 34 to make separate recordkeeping requirement; Included rule citation	Clarity and consistency
42	35	Updated rule citation	2018 LRAPA rule revisions
43	--	Included monitoring and recordkeeping requirement for grain loading standard	Clarity and consistency
--	36	Removed requirement for RTO testing	Previous testing showed compliance; Title V Monitoring and Testing guidance recommends that the previous

New Permit Condition Number	Old Permit Condition Number	Description of change	Reason for change
			particulate compliance test and VOC/HAPs emission factor verification is sufficient
--	37	Monitoring and recordkeeping for testing unnecessary with testing condition removed	Testing no longer required
44	38	Minor language updates; Updated LRAPA rule citations	Clarity and consistency; 2018 LRAPA rule revisions
45	39(a-c)	Minor language updates and condition reorganization; Included LRAPA rule citation	Clarity and consistency; 2018 LRAPA rule revisions
46	39.d.	Used part of the original condition to establish an applicable requirement; Included rule reference	Clarity and consistency
47	39.d. & 39.e.	Used part of previous Condition 39.d. and 39.e. to establish a monitoring and recordkeeping requirement	Clarity and consistency
EU-4 Emissions Limit Table	Table 5. Mill Equipment	Updated rule citations	2018 LRAPA rule revisions
48	40	Updated rule citation	2018 LRAPA rule revisions
49	41	Minor language updates; Included rule citations	Clarity and consistency; Lacking citations
49.d.	42	Included corrective actions in a sub condition under updated Condition 48	Clarity and consistency
50	43	Updated rule citation	2018 LRAPA rule revisions
--	44	Deleted language regarding no testing requirements	Condition deemed as informational only
51	45	Minor language updates; Included rule citations	Clarity and consistency; Lacking citations
EU-5 Emissions Limit Table	Table 6. Fugitive Sources	Updated rule citations	2018 LRAPA rule revisions
52	46	Minor language updates; Included LRAPA rule citation	Clarity and consistency; 2018 LRAPA rule revisions
53	47	Minor language updates; Included LRAPA rule citation	Clarity and consistency; 2018 LRAPA rule revisions
CIA-Emergency Generator	Emergency (RICE)	Minor reorganization of this permit section	Clarity and consistency
54	51.b., 51.c., & 51.e.	Isolated work practice requirements into separate condition	Clarity and consistency
55	51.b.	Included details of the oil analysis program previously incorporated by reference	Title V permit includes all applicable requirements
56	51.h.	Isolated applicable requirement into separate condition	Clarity and consistency
57	--	Included startup applicable requirements	Title V permit includes all applicable requirements
58	--	Included emissions minimization language	Title V permit includes all applicable requirements

New Permit Condition Number	Old Permit Condition Number	Description of change	Reason for change
59	50	Updated hours of operation for readiness testing to the rule-specified 100 hours	Clarity and consistency
60	51.g.	Isolated recordkeeping requirement	Clarity and consistency
61	51.a.	Isolated recordkeeping requirement	Clarity and consistency
62	--	Included recordkeeping requirement	Title V permit includes all applicable requirements
63	48	Minor language changes	Clarity and consistency
64	49	None	None
Annual PSELs	Table 7. Annual PSEL	Updated PSEL table to reflect renewal application; Included HAP PSELs	PSELs are reevaluated at every renewal
65	53	Minor language changes	Clarity and consistency
66	54	Minor language changes; Added monthly date for demonstrating compliance	Clarity and consistency
67	Table 9. Emission Factors	Updated PSEL emissions factors to reflect the latest testing; Included HAP emission factors	PSEL emission factors are reevaluated at every renewal
67.b.	54.c.	Updated testing requirements to include only the boilers in EU-1	Testing completed during previous permit term for EU-2 and EU-3 deemed sufficient
--	55-56	Incorporated HAP emission compliance demonstration and emission factors into PSEL conditions	Clarity and consistency
68	57	Minor language changes	Clarity and consistency
69	58	None	None
70	59	None	None
71	60	First semi-annual report due date incorporated as August 15th	Minor Modification - Application No. 63330
72	61	Reporting CAM excursions included	Clarity and consistency
73	62	None	None
74	68	GHG due date set to March 31 as established in OAR 340-215	Clarity and consistency
75	63	Minor language changes	Clarity and consistency
76	64	Minor language changes	Clarity and consistency
--	65	Deemed a redundant condition with general testing requirements	Clarity and consistency
77	66	None	None
78	67	None	None
79	69	Agency address updated for the EPA Region 10 Enforcement and Compliance Assurance Division	Clarity and consistency
80	--	Included non-applicable requirements	Consistent with Title V permit template
General Conditions G1 - G29	General Conditions G1 - G28	Revised based upon permit template and rule changes	Consistency with rules and Title V permit template

16. Categorically Insignificant Activities: The facility has the following categorically insignificant activities:

- Constituents of a chemical mixture present at less than 1% by weight of any chemical or compound regulated under OAR Chapter 340, Divisions 218 and 220, and LRAPA Titles 12 through 51, excluding Title 43, o0r less than 0.1% by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year
- Evaporative and tail pipe emissions from on-site motor vehicle operation
- Office activities
- Janitorial activities
- Personal care activities
- Instrument calibration
- Maintenance and repair shop
- Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment
- Temporary construction activities
- Warehouse activities
- Accidental fires
- Air vents from air compressors
- Electrical charging stations
- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment
- Pressurized tanks containing gaseous compounds
- Vacuum sheet stacker vents
- Emissions from wastewater discharge to publicly owned treatment works (POTW) provided the source is authorized to the POTW, not including on-site wastewater treatment and/or holding facilities
- Storm water settling basins
- Fire suppression and training
- Paved roads and paved parking lots within a growth boundary
- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency as determined by the LRAPA, with a total power rating of 3,000 horsepower or less
- Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems
- Non-contact steam condensate flash tanks
- Non-contact steam vents on condensate receivers, deaerators, and similar equipment
- Boiler blowdown tanks
- Ash piles maintained in a wetted condition and associated handling systems and activities
- Oil/water separators in effluent treatment systems

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

17. The following sections describe each applicable requirement and monitoring requirement in the permit, with the intent of the condition and a brief discussion of any unique features of the requirement.

17.a. Conditions 1 and 2 are general statements required in and common to all Title V permits issued by LRAPA.

17.b. Condition 3 provides a list of equipment and identification of pollution control devices for the facility.

17.c. Condition 4 is a facility-wide fugitive dust control requirement that allows the permittee to deal with potential fugitive dust problems before they become standard violations. The reasonable precautions can be required without the need to show a violation of 20% opacity for sources where reading opacity is difficult (e.g., dust from traffic on roads).

17.d. Condition 5 is a visible emissions monitoring requirement for demonstrating compliance with the facility-wide fugitive requirements of Condition 4.

17.e. Condition 6 includes the recordkeeping requirements of the VE surveys in Condition 5.

17.f. Condition 7 is a facility-wide condition that prohibits the facility from causing a nuisance and establishes timely response to any complaints that the facility operation may generate.

17.g. Condition 9 implements the long-standing particulate matter fallout provisions in LRAPA rules.

17.h. Condition 10 is a monitoring and recordkeeping requirement that monitors compliance with Condition 9 by performing periodic visible emission surveys required in Condition 5.

17.i. Condition 11 implements the LRAPA prohibition of discharging emissions that could cause injury or damage to persons or property.

17.j. Condition 12 is a monitoring requirement for demonstrating compliance with Condition 11 with semi-annual and annual compliance certifications.

17.k. Condition 13 implements emergency actions required of the facility in the event that air quality becomes so unhealthy that facility curtailments are necessary.

17.l. Condition 14 is a monitoring requirement for maintaining a log of air pollution episodes and emission reduction actions taken by the facility's responses to ensure compliance with Condition 13.

17.m. Condition 15 is a fuel requirement detailing the types of fuels that can be utilized at the facility and the sulfur content limits when using fuel oil.

17.n. Condition 16 is a monitoring requirement for obtaining certifications or SDS to verify the sulfur content of each shipment of fuel oil meets the standards in Condition 15.

17.o. Condition 17 is a standard requirement for Title V facilities stating the permittee's responsibility for the 40 CFR Part 68 accidental release provisions should the facility trigger these requirements.

17.p. Condition 18 is a process-based particulate matter emission limit that is a requirement from LRAPA title 33 Prohibited Practices and Control of Special Classes of Industry for the Board Products Industries.

17.q. Condition 19 is a monitoring requirement to establish compliance with the emission limit in Condition 18.

17.r. Condition 20 is the opacity requirements for the boilers (Boiler-1 & Boiler-2) in EU-1.

17.s. Condition 21 contains visible emissions monitoring requirements to establish compliance with Condition 20.

17.t. Condition 22 is the recordkeeping requirements to maintain the records of visual emissions inspections established in Condition 21.

17.u. Condition 23 is the grain loading limit for the boilers in EU-1.

17.v. Condition 24 is a testing requirement for the boilers in EU-1 to demonstrate compliance with the grain loading limit in Condition 23.

17.w. Condition 25 is a monitoring requirement to utilize a continuous monitoring system for measuring excess oxygen in the boilers of EU-1.

17.x. Condition 26 is a recordkeeping requirement for the monitoring in Condition 25.

17.y. Condition 27 establishes a CAM parameter range (multiclone pressure drop) that may be used to determine on-going compliance with particulate matter standards.

17.z. Conditions 28-33 are the Area Source Boiler NESHAP (40 CFR 63 Subpart JJJJJJ) requirements that apply to the facility's boilers in EU-1.

17.aa. Condition 34 is the opacity requirements for the plywood presses in EU-2.

17.bb. Condition 35 contains visible emissions monitoring requirements to establish compliance with Condition 34.

17.cc. Condition 36 is the recordkeeping requirements to maintain the records of visual emissions inspections established in Condition 35.

17.dd. Condition 37 is the grain loading limit for the plywood press vents in EU-2.

17.ee. Condition 38 is a monitoring and recordkeeping requirement for demonstrating compliance with the limit in Condition 37.

17.ff. Condition 39 is the opacity requirements for the veneer dryers in EU-3.

17.gg. Condition 40 contains visible emissions monitoring requirements to establish compliance with Condition 39.

17.hh. Condition 41 is the recordkeeping requirements to maintain the records of visual emissions inspections established in Condition 39.

17.ii. Condition 42 is the grain loading limit for the veneer dryers in EU-3.

17.jj. Condition 43 is a monitoring and recordkeeping requirement for demonstrating compliance with the limit in Condition 42.

17.kk. Condition 44 establishes the VOC control efficiency required to be maintained by the RTO is EU-3.

17.ll. Condition 45 is the monitoring and recordkeeping requirement for demonstrating compliance with the VOC control efficiency in Condition 44.

17.mm. Condition 46 is a fugitive emissions inspection requirement for the veneer dryers in EU-3.

17.nn. Condition 47 is the monitoring and recordkeeping requirement for demonstrating compliance with Condition 46.

17.oo. Condition 48 is the opacity requirement for the mill equipment in EU-4.

17.pp. Condition 49 is the monitoring and recordkeeping requirements to maintain the records of visual emissions inspections to establish compliance with Condition 48.

17.qq. Condition 50 is the grain loading limit for the mill equipment in EU-4.

17.rr. Condition 51 is a monitoring and recordkeeping requirement for demonstrating compliance with the limit in Condition 50.

17.ss. Conditions 52-53 establish requirements for minimizing fugitive emissions at the facility.

17.tt. Conditions 54-62 are the RICE NESHAP (40 CFR 63 Subpart ZZZZ) requirements that apply to the facility's categorically insignificant emergency generator (CIA-Emergency Generator).

17.uu. Conditions 63-64 contains the particulate matter grain loading and opacity limitations that apply to Insignificant Emission Units (IEUs) at the facility.

17.vv. Condition 65 lists the annual (12 consecutive calendar month period) Plant Site Emission Limits (PSELs), Unassigned Emissions and Emission Reduction Credits (ECRs) for the facility.

17.ww. Condition 66 contains the monitoring requirements needed to demonstrate compliance with the PSELs in Condition 65.

17.xx. Condition 66.a. contains the monitoring and recordkeeping requirements for all facility process parameters needed to demonstrate compliance with the PSELs in Condition 65.

17.yy. Condition 66.b. is the equation used to estimate emissions for PSELs using the production data monitored in Condition 66.a and the emission factors in Condition 67.

17.zz. Condition 67 is a table of emission factors for use in calculating facility emissions. The factors are to be used in determining PSELs for all operating scenarios. Requirements for emission factor verification testing are also identified.

17.aaa. Condition 68 contains the general testing requirements for source tests at the facility.

17.bbb. Conditions 69 through 70 contain the general monitoring and recordkeeping requirements for the facility.

17.ccc. Conditions 71 through 74 contain the specific annual and semi-annual reporting requirements for the facility.

17.ddd. Condition 75 contains the excess emissions reporting requirements for the facility.

17.eee. Condition 76 contains the requirements for reporting permit deviations.

17.fff. Conditions 77 through 79 contain general reporting requirements for the facility.

17.ggg. Condition 80 specifies the non-applicable requirements that could reasonably be considered to apply to the facility.

17.hhh. The conditions following Condition 80 are general requirements (General Conditions G1-G29) applicable to Title V sources.

EMISSION LIMITS FOR INSIGNIFICANT ACTIVITIES

18. As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate insignificant emissions, as defined in LRAPA title 12 and/or OAR 340-200-0020. For the most part, the standards that apply to IEUs are for opacity (20% limit) and particulate matter (0.10 gr/dscf limit). 40 CFR 70.6(a)(3) of the federal Title V permit rules, requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V permits. In addition, where the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the facility's compliance with the permit. However, the requirements to include in a permit testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor with respect to all emissions units and applicable requirement situations. It does not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. Where compliance with the underlying applicable requirement for an insignificant emission unit is not threatened by a lack of a regular program of monitoring and where periodic testing or monitoring is not otherwise required by the applicable requirement, then in this instance the status quo (i.e., no monitoring) will meet Section 70.6(a)(3). For this reason, this permit includes limited requirements for categorically insignificant activities.

FEDERAL REQUIREMENTS

19. The applicability of various federal rules to this facility is as follows:

19.a. **Accidental Release:** The source has certified that the facility is not subject to 40 CFR Part 68, which requires a risk management plan for toxic and flammable substances releases.

19.b. **NSPS:** The facility is not currently subject to New Source Performance Standards (40 CFR Part 60). The standards of NSPS Subpart Dc do not apply to the boilers in EU-1 because they were installed at the facility prior to the rule-specified applicability date of June 9, 1989.

19.c. **NESHAP/MACT:** The following National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, requirements are applicable to this facility:

19.c.i. Boiler Area Source NESHAP (40 CFR 63 Subpart JJJJJJ) is applicable to this facility and all requirements have been incorporated into the permit. The facility complied with the requirement to conduct an initial tune-up on September 14, 2011 and is required to continue to conduct biennial tune-ups. The facility complied with the one-time energy assessment requirement on November 6, 2013.

19.c.ii. RICE NESHAP (40 CFR 63 Subpart ZZZZ) is applicable to this facility and all requirements have been incorporated into the permit. The facility has one, 35 kW diesel-fired emergency generator that is subject to the requirements under this subpart. Based upon the definition of an emergency generator under Title 12 Subpart UU, this emission unit is not allowed to operate for non-emergency situations. Non-emergency situations do not include maintenance and testing.

19.d. **Compliance Assurance Monitoring (CAM):** The facility is subject to the provisions of 40 CFR Part 64 – Compliance Assurance Monitoring (CAM) because of its classification as a Title V facility, and because of control equipment, emission limitations and pre-control emissions at or above Title V major source levels at one (1) or more pollutant-specific emissions units. CAM applies to the multiclones controlling the boilers in EU-1 for particulate matter. The permit includes CAM requirements for the applicable units and/or control devices. The following table evaluates CAM applicability for all emission units:

Emission Unit	Uses a Control Device for a Regulated Pollutant	Pollutant	Uncontrolled Potential Emissions Exceed Major Source Threshold	Emission Limitation or Standard Applies for this Pollutant	Subject to CAM for the Pollutant
EU-1	Yes	PM	Yes	Yes	Yes
EU-2	Yes	VOC	No	Yes	No
EU-3	No	--	--	--	NA
EU-4	No	--	--	--	NA
EU-5	No	--	--	--	NA
AI Activities	No	--	--	--	NA
CIA-Emergency Generator	No	--	--	--	NA

19.d.i. The pressure drop across the multiclones must be recorded daily whenever the boilers in EU-1 are in operation. The facility is required to take corrective action if the daily pressure drop across the multiclones is outside the normal operating ranges detailed in the permit. Annual inspections must be conducted of the multiclones for signs of physical degradation that could affect the performance of the control device. Records must be maintained of all parameters monitored, excursions, corrective actions taken, and inspection and maintenance activities.

CURRENT PLANT SITE PRODUCTION

20. The facility can be operated as much as 24 hours per day, 7 days per week, and 52 weeks per year. The production rates used as a basis for determining the facility capacity and PSELs are as follows:

Emission Unit	Activity	Rate	Units
EU-1: Boilers	Boiler #1 Steam Production	385,000	Mlbs steam/year
	Boiler #2 Steam Production	385,000	Mlbs steam/year
EU-2: Plywood Presses	Plywood Production	145,000	Msf ⅜″-basis/year
EU-3: Veneer Dyers	Veneer Production	248,000	Msf ⅜″-basis/year
EU-4: Mill Equipment	Material Handling	23,131	BDT/year
EU-5: Fugitive Sources	Hog Fuel Storage	674	BDT/year
	Green Chip Bin Loadout	5,905	BDT/year
	Debarkers Throughput	133,920	BDT/year
	Veneer Lathes Production	248,000	Msf ⅜″-basis/year

PLANT SITE EMISSION LIMIT (PSEL) INFORMATION

21. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limit, and emissions capacity.

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limit (PSEL)			Capacity (tons/yr)
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase Over Netting Basis (tons/yr)	
PM	152	152	152	176	176	24	208
PM_{10}	110	110	110	124	124	14	195
$PM_{2.5}$	NA	65	65	74	74	9	117
CO	62	62	62	161	125	63	125
NO_x	81	81	81	89	90	9	90
SO_2	3	3	3	39	39	36	5.4
VOC	104	104	104	80	54	(50)	54
Single HAP	NA	NA	NA	9	9	NA	8.9
Total HAP	NA	NA	NA	24	24	NA	18
GHG	64,048	51,406	64,048	74,000	130,000	65,952	137,323

21.a. The baseline emission rates for PM, PM_{10}, CO, NO_X, SO_2, and VOC were determined in previous permitting actions and there are no changes. The baseline emission rates are based upon actual estimated emission totals for the 1978 calendar year. Emissions are accounted from Boiler-1 and Boiler-2 in EU-1, three (3) plywood presses, four (4) veneer dryers, mill equipment, material handling fugitives, unpaved road emissions, and aggregate insignificant activities. Attachment B of this Review Report contains the rates, factors, and additional information about the baseline calculations. A baseline emission rate is not required for $PM_{2.5}$ in accordance with the definition of "baseline emission rate" in LRAPA title 12.

21.b. The GHG baseline emission rate is based upon actual anthropogenic emissions from the 2010 calendar year and accounts for hogged fuel combustion in Boiler-1 and Boiler-2 of EU-1. The GHG baseline was adjusted in this permit action due to a recalculation of the CO_2e emissions for the baseline year and the detailed calculations can be found in Attachment D of this Review Report. Compliance with the GHG PSEL is provided by way of the annual reporting required by OAR 340 division 215.

21.c. The PSEL for $PM_{2.5}$ is established using the procedure specified in the definition of "netting basis" in LRAPA title 12. The $PM_{2.5}$ netting basis was updated in the previous permit term as Addendum No. 3 and was a significant permit modification correcting an emission factor calculation error.

21.d. The PSELs for PM, PM_{10}, and $PM_{2.5}$ are established at the netting basis plus one (1) ton less than the SER in accordance with Paragraph 42-0041(4)(a) of LRAPA title 42.

21.e. The PSEL for SO_2 is established at the generic PSEL level in accordance with Subsection 42-0041(1) of LRAPA title 42.

21.f. The PSELs for Single HAP and Total HAP are established at the generic PSEL level in accordance with Subsection 42-0060(1) of LRAPA title 42.

21.g. Detailed calculations for the proposed PSELs for all pollutants can be found in the detail sheets of this Review Report.

UNASSIGNED EMISSIONS AND EMISSION REDUCTION CREDITS

22. The facility has unassigned emissions as shown below. Unassigned emissions are established with this renewal and will be reduced to no more than the significant emission rate (SER) at the following renewal in accordance with LRAPA title 42 (Section 42-0055).

Pollutant	PSEL (tons/yr)	Previous Unassigned Emissions (tons/yr)	Proposed Unassigned Emissions (tons/yr)	Previous ERCs (tons/yr)	Proposed ERCs (tons/yr)
PM	176	--	--	--	--
PM_{10}	124	--	--	--	--
$PM_{2.5}$	74	--	--	--	--
CO	125	--	--	--	--
NO_x	90	--	--	--	--
SO_2	39	--	--	--	--
VOC	54	24	50	--	--
GHG	130,000	--	--	--	--

SIGNIFICANT EMISSION RATE

23. The proposed PSEL increase over the netting basis is less than the Significant Emission Rate (SER) as defined in LRAPA title 12 rules for all of the pollutants as shown below.

Pollutant	Netting Basis (tons/year)	Proposed PSEL (tons/year)	Increase from Netting Basis (tons/year)	SER (tons/year)
PM	152	176	24	25
PM_{10}	110	124	14	15
$PM_{2.5}$	65	74	9	10
CO	62	125	63	100
NO_x	81	90	9	40
SO_2	3	39	36	40
VOC	104	54	(50)	40
Single HAP	NA	9	NA	10
Total HAP	NA	24	NA	25
GHG	64,048	130,000	65,952	75,000

HAZARDOUS AIR POLLUTANTS (HAPS)

24. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and is therefore, not yet required to perform a risk assessment or report annual emissions of toxic air contaminants.

    LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and 2020 and regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All 187 hazardous air pollutants are on the list of approximately 600 toxic air contaminants. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially.

25. The production rates associated with the PSEL are such that the facility does not operate over the major source thresholds for hazardous air pollutants. The facility elected to accept federally enforceable limits on production to avoid the requirements of the Plywood & Composite Wood Products (PCWP) National Emission Standard for Hazardous Air Pollutants (NESHAP) prior to the applicable compliance date. As part of the previous permit renewal, specific permit limitations and testing requirements were added to ensure the facility continues to operate under the major source HAP thresholds. The facility tested the veneer dryers in EU-3, one representative press in EU-2, and Boiler-1 and Boiler-2 in EU-1 during the previous permit term to ensure compliance with the synthetic minor conditions. Tracking of methanol and other HAP emissions has been deemed sufficient to ensure compliance with the synthetic minor HAP limitations. As a synthetic minor source of HAPs, the facility is not subject to any major source NESHAP

including the Plywood & Composite Wood Products NESHAP. Detailed HAP emissions calculations are included in Appendix C of this Review report.

STRATOSPHERIC OZONE DEPLETING REQUIREMENTS

26. The facility does not manufacture, sell, distribute, or use in the manufacturing of a product any stratospheric ozone-depleting substances and the EPA 1990 Clean Air Act, as amended. Sections 601-618 of the act do not apply to the facility except that air conditioning units and fire extinguishers containing Class I or Class II substances must be serviced by certified repairmen to ensure that the substances are recycled or destroyed appropriately.

MONITORING REQUIREMENTS

27. Section 70.6(a)(3) of the federal Title V permit rules, requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V permits. In addition, where the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

However, the requirements to include in a permit testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor with respect to all emissions units and applicable requirement situations. It does not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. Where compliance with the underlying applicable requirement for an insignificant emission unit is not threatened by a lack of a regular program of monitoring and where periodic testing or monitoring is not otherwise required by the applicable requirement, then in this instance, the status quo (i.e., no monitoring) will meet section 70.6(a)(3). For this reason, this permit does not include any monitoring for insignificant emissions units and activities.

The Title V permit does include monitoring for all requirements that apply to significant emissions units in addition to the testing requirements in the permit. Periodic visible emissions observations are required for all particulate emissions sources. In addition, the permit includes monitoring of operating parameters for other emission units and pollution control devices. It is assumed that as long as these processes and controls are properly operated, the particulate emissions levels will be below the emissions limits specified in the permit.

The facility is required to record material production and throughput totals and to estimate actual emissions. The estimations are to be based upon production data, emission factors and estimation methods used in the facility’s application or other LRAPA-approved method.

GENERAL TESTING REQUIREMENTS

28. This section is provided so that the permittee and LRAPA will know what test methods should be used to measure pollutant emissions in the event that testing is conducted for any reason. This section does not by itself require the permittee to conduct any more testing than was previously included in the permit. Although the permit may not require testing because other routine monitoring is used to determine compliance, LRAPA and EPA always have the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntary conduct testing to confirm the compliance status. In either case, the methods to be used for testing in the

event that testing is conducted are included in the permit. This is true for SIP as well as NSPS emission limits and standards.

SOURCE TEST RESULTS

29. This facility has conducted various source tests to comply with permit requirements. The table below shows the results of the test reports on file at LRAPA for equipment that remained in use after the July 2014 fire at the facility or that were installed during the rebuild of the facility starting in August 2015.

Emission Unit and Device		Test Date	Testing Production Rate	Results
EU-1	Boiler-1	07/26/1993	53,000 lb steam/hr	PM: 0.121 gr/dscf @12% CO_2
	Boiler-2	07/27/1993	51,000 lb steam/hr	PM: 0.120 gr/dscf @12% CO_2
EU-1	Boiler-1	06/11/1999	35,500 lb steam/hr	PM: 0.36 lb/Mlb steam NO_X: 0.36 lb/Mlb steam CO: 0.13 lb/Mlb steam VOC: 0.001 lb/Mlb steam
	Boiler-2	06/11/1999	39,100 lb steam/hr	PM: 0.44 lb/Mlb steam NO_X: 0.53 lb/Mlb steam CO: 0.27 lb/Mlb steam VOC: 0.0006 lb/Mlb steam
EU-1	Boiler-1	03/04/2003	49,000 lb steam/hr	PM: 0.287 lb/Mlb steam
EU-1	Boiler-2	02/19/2004	31,700 lb steam/hr	PM: 0.222 lb/Mlb steam
EU-1	Boiler-1	06/02/2011	43,100 lb steam/hr	PM: 0.46 lb/Mlb steam
	Boiler-2	06/02/2011	43,200 lb steam/hr	PM: 0.55 lb/Mlb steam
EU-1	Boiler-1	06/04/2012	41,300 lb steam/hr	HCl: 0.0025 lb/Mlb steam Mn: 0.00047 lb/Mlb steam Acrolein: $8.4x10^{-4}$ lb/Mlb steam HCHO: 0.0015 lb/Mlb steam Benzene: 0.00018 lb/Mlb steam Styrene: $1.4x10^{-5}$ lb/Mlb steam
EU-2	Press Vents	03/31/2014	39.0 Msf-⅜" basis/hr	Methanol: 0.0282 lb/Msf-⅜" basis HCHO: 0.00057 lb/Msf-⅜" basis Phenol: 0.00124 lb/Msf-⅜" basis
EU-2	Press Vent	06/09/2014	8.858 Msf-⅜" plywood/hr	Methanol: 0.130 lb/Msf-⅜" plywood HCHO: 0.0074 lb/Msf-⅜" Phenol: 0.0104 lb/Msf-⅜" Acrolein: 0.0024 lb/Msf-⅜" Acetaldehyde: 0.0122 lb/Msf-⅜" Propionaldehyde: 0.0024 lb/Msf-⅜"
EU-1	Boiler-1	06/17/2014	43,390 lb steam/hr	PM: 0.687 lb/Mlb steam
	Boiler-2	06/17/2014	42,730 lb steam/hr	PM: 0.379 lb/Mlb steam

Emission Unit and Device		Test Date	Testing Production Rate	Results
EU-3	RTO	11/8/2016	40.677 Msf-⅜" veneer/hr	VOC: 0.028 lb/Msf-⅜" veneer PM: 0.015 lb/Msf-⅜" HCHO: 0.0024 lb/Msf-⅜" Methanol: Non-detect
EU-2	Press Vent	02/27/2018	14.560 Msf-⅜" plywood/hr	Methanol: 0.122 lb/Msf-⅜" plywood HCHO: 0.003 lb/Msf-⅜" Acetaldehyde: 0.010 lb/Msf-⅜" Phenol: Non-detect Acrolein: Non-detect Propionaldehyde: Non-detect
EU-1	Boiler-1	07/21/2020	33,300 lb steam/hr	PM: 0.085 gr/dscf @12% CO_2
	Boiler-2	07/22/2020	33,200 lb steam/hr	PM: 0.132 gr/dscf @12% CO_2

REPORTING REQUIREMENTS

30. The permit includes a requirement for submitting semi-annual and annual monitoring reports that include semi-annual compliance certifications. Excess emissions are required to be reported to LRAPA immediately as well as in a logbook attached to the annual report. Emissions fees reports are required annually.

COMPLIANCE HISTORY

31. The facility has been issued the following enforcement actions since the beginning of the Title V permit program: (Note: The facility was owned by McKenzie Forest Products until June 2007, at which time it was bought by Swanson Group)

    31.a. McKenzie Forest Products – On April 21, 2003, in response to a citizen's complaint regarding heavy brown smoke being emitted from the source, LRAPA found that the source failed to take reasonable precautions to prevent particulate matter from becoming airborne during maintenance performed on the hog fuel bin. As a result, McKenzie Forest Products was assessed a civil penalty of $2,100 on June 5, 2003. The civil penalty was paid in full on June 28, 2003.

    31.b. McKenzie Forest Products – On August 22, 2006, LRAPA observed at the facility violations of the air quality permit conditions pertaining to monitoring, recordkeeping, and reporting. As a result, McKenzie Forest Products was assessed a civil penalty of $2,400 on March 7, 2007. The civil penalty was paid in full on March 23, 2007.

    31.c. Swanson Group – On September 27, 2007, LRAPA observed at the facility that Scrubber #1 for the veneer dryers was exceeding the permitted limit of 20% opacity. As a result, Swanson group was assessed a civil penalty of $2,400 on February 4, 2008. The civil penalty was paid in full on February 11, 2008.

    31.d. Swanson Group – On May 19, 2009, LRAPA issued a Notice of Non-Compliance (NON) No. 3101 to Swanson for failure to conduct particulate matter stack testing on Boilers-1 and Boiler-2. The NON was resolved via Permit Condition No. 19 which required Swanson to conduct additional stack tests on the Boilers during the next permit term.

    31.e. Swanson Group – On June 11, 2009, LRAPA assessed a civil penalty (No. 09-3024) for failure to report permit deviations in a timely manner and for failure to account for permit deviations in the

31.f. semi-annual report. The civil penalty in the amount of $1,350 was paid in full by Swanson on June 25, 2009.

31.g. Swanson Group was issued Notice of Non-Compliance (NON) #3236 on November 10, 2010, for violations related to a January 31, 2010 boiler excess emission event. Notice of Civil Penalty (NCP) 11-3236 was issued May 23, 2011. The facility paid the assessed civil penalty in the amount of $6,000 and the file was closed.

31.h. Swanson Group was issued NON #3294 on April 7, 2011, for violations related to exceeding 20% opacity from the sanderdust baghouse in EU-4. NCP 11-3294 imposed a penalty of $3,000. The facility paid a reduced penalty in the amount of $1,800 and the file was closed.

31.i. Swanson Group was issued NON #3445 on May 7, 2013, for violations related to failing to comply with permit emission calculation requirements. NCP 13-3445 was issued August 21, 2013, and imposed a penalty in the amount of $4,400. The facility paid a reduced penalty in the amount of $3,400 and the file was closed.

32. As of the date of this permit issuance, there are no open enforcement actions or non-compliances for this facility.

33. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The following table indicates the inspection history of this facility since the rebuild of the facility in August 2015:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	10/01/2016	In Compliance
LRAPA - Full Compliance Evaluation	10/17/2018	In Compliance
EPA/LRAPA - Full Compliance Evaluation	09/22/2021	Processing – Status Currently Undetermined

PUBLIC NOTICE

34. This permit will be on public notice from June 8, 2022 to July 13, 2022. Comments may be submitted in writing during the comment period. LRAPA will hold a public hearing if requested by 10 or more individuals or one person representing a group of 10 or more individuals. After the comment period and hearing, if requested, LRAPA will review the comments and modify the permit as may be appropriate. A proposed permit will then be sent to EPA for a 45-day review period. LRAPA may requested and EPA may agree to an expedited review of 5 days if there were no substantive or adverse comments during the comment period.

If the EPA does not object in writing, any person may petition the EPA within 60 days after the expiration of EPA's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in OAR 340-218-0210, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.

EMISSIONS DETAIL SHEETS

35. Detailed emission calculations and supporting information are found in the following appendices:
Appendix A: PTE Emission Calculations
Appendix B: Baseline Emission Calculations
Appendix C: HAP Emission Calculations – Synthetic Minor Limits
Appendix D: GHG PTE and Baseline Calculations Devices
Appendix E: Mill Equipment (EU-4) Emission Factor Determination
Appendix F: Detailed Emission Unit Equipment List and Control

FACILITY CAPACITY EMISSIONS DETAIL SHEET

Pollutant	Emission Unit	Annual Production/ Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
PM	EU-1: Boiler-1	385,000	Mlb steam/yr	0.491	lb/Mlb Steam	ST 2011, 2014 & 2020	94.6
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.471	lb/Mlb Steam	ST 2011, 2014 & 2020	90.6
	EU-2: Plywood Presses	145,000	Msf-⅜″/yr	0.203	lb/Msf-⅜″	AP-42 Table 10.5-4	14.7
	EU-3: Veneer Dryers-Heated Zone	248,000	Msf-⅜″/yr	0.015	lb/Msf-⅜″	ST 2016	1.86
	EU-3: Veneer Dryers-Fugitives	248,000	Msf-⅜″/yr	7.50E-04	lb/Msf-⅜″	Estimated @5% total emissions	0.09
	EU-4: ME Baghouse-1	8,613	BDT/yr	0.001	lb/BDT	ODEQ AQGP-010	0.004
	EU-4: ME Baghouse-2	145,000	Msf-⅜″/yr	0.00105	lb/Msf-⅜″	LRAPA Estimate (Appendix E)	0.076
	EU-4: ME Baghouse-3	145,000	Msf-⅜″/yr	0.00105	lb/Msf-⅜″	LRAPA Estimate (Appendix E)	0.076
	EU-4: ME Target Boxes	14,518	BDT/yr	0.10	lb/BDT	ODEQ AQGP-010	0.73
	EU-4: ME Cyclone #8	145,000	Msf-⅜″/yr	0.034	lb/Msf-⅜″	LRAPA Estimate (Appendix E)	2.47
	EU-5: Fugitive Material Handling	8,760	hr/yr	0.48	lb/hr	LRAPA Estimate	2.10
	EU-AI: Aggregate Insignificant						1
						Total PM	**208.3**
PM_{10}	EU-1: Boiler-1	385,000	Mlb steam/yr	0.467	lb/Mlb Steam	ST 2011, 2014 & 2020, ODEQ AQ-EF03 (95% PM)	89.9
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.447	lb/Mlb Steam	ST 2011, 2014 & 2020, ODEQ AQ-EF03 (95% PM)	86.1
	EU-2: Plywood Presses	145,000	Msf-⅜″/yr	0.173	lb/Msf-⅜″	AP-42 Table 10.5-4, ODEQ AQ-EF03	12.5
	EU-3: Veneer Dryers-Heated Zone	248,000	Msf-⅜″/yr	0.015	lb/Msf-⅜″	ST 2016, ODEQ AQ-EF03	1.86
	EU-3: Veneer Dryers-Fugitives	248,000	Msf-⅜″/yr	7.50E-04	lb/Msf-⅜″	Estimated @5% total emissions	0.09
	EU-4: ME Baghouse-1	8,613	BDT/yr	0.001	lb/BDT	ODEQ AQGP-010	0.004
	EU-4: ME Baghouse-2	145,000	Msf-⅜″/yr	0.00104	lb/Msf-⅜″	LRAPA Estimate (Appendix E), ODEQ AQ-EF03	0.076
	EU-4: ME Baghouse-3	145,000	Msf-⅜″/yr	0.00104	lb/Msf-⅜″	LRAPA Estimate (Appendix E), ODEQ AQ-EF03	0.076
	EU-4: ME Target Boxes	14,518	BDT/yr	0.085	lb/BDT	ODEQ AQGP-010	0.62
	EU-4: ME Cyclone #8	145,000	Msf-⅜″/yr	0.029	lb/Msf-⅜″	LRAPA Estimate (Appendix E), ODEQ AQ-EF03	2.10
	EU-5: Fugitive Material Handling	8,760	hr/yr	0.24	lb/hr	LRAPA Estimate	1.05
	EU-AI: Aggregate Insignificant						1
						Total PM_{10}	**195.3**

FACILITY CAPACITY EMISSIONS DETAIL SHEET (CONTINUED)

Pollutant	Emission Unit	Annual Production/ Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
$PM_{2.5}$	EU-1: Boiler-1	385,000	Mlb steam/yr	0.280	lb/Mlb Steam	ST 2011, 2014 & 2020, ODEQ AQ-EF08 (60% PM_{10})	53.9
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.268	lb/Mlb Steam	ST 2011, 2014 & 2020, ODEQ AQ-EF08 (60% PM_{10})	51.6
	EU-2: Plywood Presses	145,000	Msf-⅜″/yr	0.086	lb/Msf-⅜″	AP-42 Table 10.5-4, ODEQ AQ-EF08	6.25
	EU-3: Veneer Dryers-Heated Zone	248,000	Msf-⅜″/yr	0.015	lb/Msf-⅜″	ST 2016, ODEQ AQ-EF08	1.86
	EU-3: Veneer Dryers-Fugitives	248,000	Msf-⅜″/yr	3.75E-04	lb/Msf-⅜″	LRAPA Estimate (50% PM_{10})	0.05
	EU-4: ME Baghouse-1	8,613	BDT/yr	0.001	lb/BDT	ODEQ AQGP-010	0.004
	EU-4: ME Baghouse-2	145,000	Msf-⅜″/yr	0.00104	lb/Msf-⅜″	LRAPA Estimate (Appendix E), ODEQ AQ-EF08	0.076
	EU-4: ME Baghouse-3	145,000	Msf-⅜″/yr	0.00104	lb/Msf-⅜″	LRAPA Estimate (Appendix E), ODEQ AQ-EF08	0.076
	EU-4: ME Target Boxes	14,518	BDT/yr	0.05	lb/BDT	ODEQ AQGP-010	0.36
	EU-4: ME Cyclone #8	145,000	Msf-⅜″/yr	0.014	lb/Msf-⅜″	LRAPA Estimate (Appendix E), ODEQ AQ-EF08	1.02
	EU-5: Fugitive Material Handling	8,760	hr/yr	0.24	lb/hr	LRAPA Estimate	1.05
	EU-AI: Aggregate Insignificant						1
						Total $PM_{2.5}$	**117.3**
SO_2	EU-1: Boiler-1	385,000	Mlb steam/yr	0.014	lb/Mlb Steam	ODEQ AQ-EF02	2.7
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.014	lb/Mlb Steam	ODEQ AQ-EF02	2.7
						Total SO_2	**5.4**
NO_x	EU-1: Boiler-1	385,000	Mlb steam/yr	0.198	lb/Mlb Steam	ST 2003	38.1
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.266	lb/Mlb Steam	ST 2003	51.2
	EU-3: Veneer Dryers-RTO Combustion	8,760	hr/yr	0.234	lb/hr	RTO Manufacturer Data	1.0
						Total NO_x	**90.3**
CO	EU-1: Boiler-1	385,000	Mlb steam/yr	0.376	lb/Mlb Steam	ST 2003	72.4
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.255	lb/Mlb Steam	ST 2003	49.1
	EU-3: Veneer Dryers-RTO Combustion	8,760	hr/yr	0.749	lb/hr	RTO Manufacturer Data	3.3
						Total CO	**124.7**
VOC	EU-1: Boiler-1	385,000	Mlb steam/yr	0.002	lb/Mlb Steam	ST 1999 & 2003	0.29
	EU-1: Boiler-2	385,000	Mlb steam/yr	0.009	lb/Mlb Steam	ST 1999 & 2003	1.8
	EU-2: Plywood Presses	145,000	Msf-⅜″/yr	0.252	lb/Msf-⅜″	ST 2018	18.3
	EU-3: Veneer Dryers-Heated Zone	248,000	Msf-⅜″/yr	0.028	lb/Msf-⅜″	ST 2016	3.5
	EU-3: Veneer Dryers-Cooling Sections	248,000	Msf-3/8"/yr	0.0286	lb/Msf-3/8"	EPA Region 10 EF for Veneer Dryers	3.5
	EU-3: Veneer Dryers-Fugitives	248,000	Msf-⅜″/yr	0.0026	lb/Msf-⅜″	EPA Region 10 EF for Veneer Dryers	0.32
	EU-4: ME Baghouse-1-Panel Saw	145,000	Msf-⅜″/yr	0.086	lb/Msf-⅜″	ODEQ AQGP-010	6.2
	EU-4: ME Baghouse-2-Panel Sanding	145,000	Msf-⅜″/yr	0.18	lb/Msf-⅜″	ODEQ AQGP-010	13.1
	EU-5: Material Handling-Hog Fuel Pile	674	BDT/yr	1.02	lb/BDT	NCASI Technical Bulletin No.723	0.34
	EU-5: Material Handling-Bark Chippers	145,000	Msf-⅜″/yr	0.068	lb/Msf-⅜″	ODEQ AQGP-010	4.9
	EU-5: Material Handling-Log Vaults	145,000	Msf-⅜″/yr	0.012	lb/Msf-⅜″	ODEQ AQGP-010	0.9
	EU-AI: Aggregate Insignificant						1
						Total VOC	**54.1**

FACILITY CAPACITY EMISSIONS DETAIL SHEET (CONTINUED)

Aggregate Insignificant Emissions

Pollutant	Emission Unit	Annual Production/Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
PM	AI: Truck Load Out	5,905	BDT	0.001	lb/BDT	Engineering Estimate	3.0E-03
	AI: Log Debarkers	133,920	BDT	0.0048	lb/BDT	Weyco-Foster Permit 2006	0.32
						TOTAL PM	**0.32**

Pollutant	Emission Unit	Annual Production/Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
PM_{10}	AI: Truck Load Out	5,905	BDT	0.001	lb/BDT	Engineering Estimate	3.0E-03
	AI: Log Debarkers	133,920	BDT	0.0024	lb/BDT	Weyco-Foster Permit 06, 50% PM Est.	0.16
						TOTAL PM_{10}	**0.16**

Pollutant	Emission Unit	Annual Production/Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
$PM_{2.5}$	AI: Truck Load Out	5,905	BDT	0.001	lb/BDT	Engineering Estimate	3.0E-03
	AI: Log Debarkers	133,920	BDT	0.0012	lb/BDT	Weyco-Foster Permit 06, AQ-EF08	0.08
						TOTAL $PM_{2.5}$	**0.08**

Pollutant	Emission Unit	Annual Production/Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
VOC	AI: Veneer Lathes	248,000	Msf-⅜″ veneer	6.77E-03	lb/Msf-⅜″	1999 Title V Application[(1)]	0.84
	AI: Resin and Glue Tanks	145,000	Msf-⅜″ plywood	1.33E-04	lb/Msf-⅜″	Weyco-Foster Permit 2006	9.6E-03
						TOTAL VOC	**0.85**

[1]NOTE: 1999 Title V Application lists the estimated combined VOC emissions from Lathe L-1 and Lathe L-2 as 0.526 tons/yr. The combined dryer throughput in the application for Veneer Dryer-1 and Dryer-2 is listed as 310,800 Msf-⅜″/yr.

BASELINE EMISSION RATES EMISSIONS DETAIL SHEET

Pollutant	Emission Unit		Annual Production/ Process Rate		Emissions Factor			Emissions
			Rate	Units	Rate	Units	Reference	tons/yr
PM	EU-1: Boiler-1		240,900	Mlb steam/yr[1]	0.360	lb/Mlb Steam	December 1979 Source Test[3]	43.4
	EU-1: Boiler-2		239,460	Mlb steam/yr[2]	0.430	lb/Mlb Steam	December 1979 Source Test[4]	51.5
	EU-2: Plywood Presses		163,000	Msf-⅜″/yr	0.203	lb/Msf-⅜″	AP-42, Table 10.5-4	16.5
	EU-3: Veneer Dryers-Heated Zone		179,900	Msf-⅜″/yr[5]	0.083	lb/Msf-⅜″	August 2002 Source Test	7.47
	EU-3: Veneer Dryers-Fugitives		179,900	Msf-⅜″/yr	0.0075	lb/Msf-⅜″	LRAPA Estimate[6]	0.675
	EU-4[7]	Cyclone #1	18	BDT	0.50	lbs/BDT	DEQ AQ-EF02	0.005
		Cyclone #2	2,080	Hours	5.02	lbs/hour	May 1978 Source Test	5.22
		Cyclone #3	2,080	Hours	1.53	lbs/hour	May 1978 Source Test	1.59
		Cyclone #4	2,080	Hours	1.65	lbs/hour	May 1978 Source Test	1.72
		Cyclone #5	8,760	Hours	2.93	lbs/hour	May 1978 Source Test	12.8
		Cyclone #6	8,760	Hours	0.64	lbs/hour	May 1978 Source Test	2.80
		Cyclone #7	6,239	BDT	0.001	lb/BDT	DEQ AQ-EF02	0.003
		Cyclone #9	167	BHT-Sanderdust[8]	2.00	lb/BDT	DEQ AQ-EF02	0.167
		Baghouse #2	666	BDT-Sanderdust[8]	0.04	lb/BDT	DEQ AQ-EF02	0.013
	EU-5: Fugitive Material Handling		1	year	2.4	tons PM/year[9]	1999 App., page 123A	2.35
	EU-5: Unpaved Roads		1	year	5.2	tons PM/year	1978 File Note	5.20
	EU-AI: Aggregate Insignificant							1
							Total PM	**152**

Pollutant	Emission Unit		Annual Production/ Process Rate		Emissions Factor			Emissions
			Rate	Units	Rate	Units	Reference	tons/yr
PM_{10}	EU-1: Boiler-1		240,900	Mlb steam/yr	0.274	lb/Mlb Steam	February 1985 Source Test [PM10 =76%PM]	33.0
	EU-1: Boiler-2		239,460	Mlb steam/yr	0.327	lb/Mlb Steam	February 1985 Source Test [PM10 =76%PM]	39.1
	EU-2: Plywood Presses		163,000	Msf-⅜″/yr	0.173	lb/Msf-⅜″	DEQ AQ-EF03	14.1
	EU-3: Veneer Dryers-Heated Zone		179,900	Msf-⅜″/yr	0.083	lb/Msf-⅜″	DEQ AQ-EF03	7.47
	EU-3: Veneer Dryers-Fugitives		179,900	Msf-⅜″/yr	0.0075	lb/Msf-⅜″	DEQ AQ-EF03	0.67
	EU-4	Cyclone #1	18	BDT	0.25	lbs/hour	DEQ AQ-EF03	0.002
		Cyclone #2	2,080	hours	2.51	lbs/hour	DEQ AQ-EF03	2.61
		Cyclone #3	2,080	hours	0.77	lbs/hour	DEQ AQ-EF03	0.80
		Cyclone #4	2,080	hours	0.83	lbs/hour	DEQ AQ-EF03	0.86
		Cyclone #5	8,760	hours	1.47	lbs/hour	DEQ AQ-EF03	6.42
		Cyclone #6	8,760	hours	0.32	lbs/hour	DEQ AQ-EF03	1.40
		Cyclone #7	6,239	BDT	0.001	lb/BDT	DEQ AQ-EF03	0.003
		Cyclone #9	167	BDT-Sanderdust	1.00	lb/BDT	DEQ AQ-EF03	0.084
		Baghouse #2	666	BDT-Sanderdust	0.04	lb/BDT	DEQ AQ-EF03	0.013
	EU-5: Fugitive Material Handling		1	year	0.8	tons PM/year	AP-42 (13.2.4)	0.82
	EU-5: Unpaved Roads		1	year	1.6	tons PM/year	AP-42 (Table 13.2.2-2)	1.61
	EU-AI: Aggregate Insignificant							1
							Total PM_{10}	**110**

BASELINE EMISSION RATES EMISSIONS DETAIL SHEET (CONTINUED)

Pollutant	Emission Unit	Annual Production/ Process Rate		Emissions Factor			Emissions
		Rate	Units	Rate	Units	Reference	tons/yr
SO_2	EU-1: Boiler-1	240,900	Mlb steam/yr	0.014	lb/Mlb Steam	DEQ AQGP-010	1.7
	EU-1: Boiler-2	239,460	Mlb steam/yr	0.014	lb/Mlb Steam	DEQ AQGP-010	1.7
						Total SO_2	**3.4**
NO_x	EU-1: Boiler-1	240,900	Mlb steam/yr	0.278	lb/Mlb Steam	Average 99 & 03 tests	33.5
	EU-1: Boiler-2	239,460	Mlb steam/yr	0.397	lb/Mlb Steam	Average 99 & 03 tests	47.5
						Total NO_x	**81**
CO	EU-1: Boiler-1	240,900	Mlb steam/yr	0.254	lb/Mlb Steam	Average 99 & 03 tests	30.6
	EU-1: Boiler-2	239,460	Mlb steam/yr	0.261	lb/Mlb Steam	Average 99 & 03 tests	31.2
						Total CO	**62**
VOC	EU-1: Boiler-1	240,900	Mlb steam/yr	0.002	lb/Mlb Steam	Average 99 & 03 tests	0.18
	EU-1: Boiler-2	239,460	Mlb steam/yr	0.009	lb/Mlb Steam	Average 99 & 03 tests	1.11
	EU-2: Plywood Presses	163,000	Msf-⅜″/yr	0.07	lb/Msf-⅜″	DEQ AQGP-010	5.71
	EU-3: Veneer Dryers-Heated Zone	179,900	Msf-⅜″/yr	0.604	lb/Msf-⅜″	8/02 Source Test	54.3
	EU-3: Veneer Dryers-Cooling Sections	179,900	Msf-⅜″/yr	0.08	lb/Msf-⅜″	DEQ AQGP-010	7.20
	EU-3: Veneer Dryers-Fugitives	179,900	Msf-⅜″/yr	0.06	lb/Msf-⅜″	DEQ AQGP-010	5.40
	EU-4: ME Baghouse-2-Panel Sanding	163,000	Msf-⅜″/yr	0.18	lb/Msf-⅜″	DEQ AQGP-010	14.7
	EU-4: ME Baghouse-1-Panel Saw	163,000	Msf-⅜″/yr	0.088	lb/Msf-⅜″	DEQ AQGP-010	7.17
	EU-5: Material Handling-Log Vaults	163,000	Msf-⅜″/yr	0.012	lb/Msf-⅜″	DEQ AQGP-010	0.98
	EU-5: Material Handling-Bark Chippers	179,900	Msf-⅜″/yr	0.068	lb/Msf-⅜″	DEQ AQGP-010	6.12
	EU-5: Material Handling-Hog Fuel Pile	674	BDT/yr[10]	0.002	lb/BDT[11]	NCASI TB# 723 (9/96)	0.34
	EU-AI: Aggregate Insignificant						1
						Total VOC	**104**

[1]NOTE: Boiler-1 (B-1) Steam Production is based on the 1978 ACDP Application. The average steam production rate was 27,500 lb/hour and the boiler operated 8760 hours.
[2]NOTE: Boiler-2 (B-2) Steam Production is based on the 1978 ACDP Application. The average steam production rate was 27,500 lb/hour and the boiler was operated 8616 hours.
[3]NOTE: B-1 source test emission rate of 20.42 lb/hour at a steaming rate of 56,250 lb/hour. Emission Factor = 20.42 lb PM/56.25 Mlb steam = 0.36 lb PM/Mlb steam.
[4]NOTE: B-2 source test grain loading at 0.28 gr/dscf at a steaming rate of 67.25 Mlb/hour. Emission Factor = [(.20/.28) X 40.9 lb/hour] / 67.25 Mlb steam = 0.43 lb PM/Mlb steam.
[5]NOTE: Dryer throughput based on plywood production and estimated 10% wastage of veneer in the production of plywood. 163,000,000 sf plywood*(1.1)=179,300,000 sf veneer.
[6]NOTE: Dryer Fugitives were estimated to be 5% of the total emissions. From DEQ AQ-EF02 an uncontrolled emission factor of 0.15 lb PM/Mft2 was used to calculate total emissions. Dryer Fugitive EF = (0.15lb/Msf)*(0.05) = 0.0075 lb PM/Msf veneer.
[7]NOTE: Throughput rates based on baseline emissions calculator on file from February 24, 1984.
[8]NOTE: Because of Baghouse #2 plugging problems at the time, Swanson Group estimates that the backup cyclone #9 was in use about 20% of the time. Total sanderdust processed = Cyclone #2+Cyclone #3+Cyclone #4 =833 BDT. In 1998, when Baghouse #3 (Bag-3) was installed, the Sanderdust Silo system was reconfigured so that the sanderdust collected by Bag-3 was conveyed to Cyclone #9 and the cyclone exhaust was ducted to Baghouse #2.
[9]NOTE: Baseline calculations in the 1999 application based on an annual plywood production of 163 MMsf-⅜″ basis. Emission value adjusted to corrected baseline veneer throughput of 179.3 MMsf.
[10]NOTE: Hog Fuel Emission Factor based on the average of the values given in Table 4 of NCASI TB 723 for Douglas fir sawdust and bark from winter harvested logs. VOC EF = (1.05 + 0.63)/2 lb C/BDT x (1.22) to convert emission value to propane basis = 1.02 lb VOC/BDT.
[11]NOTE: Assumes a 3-day supply at max hourly steam loading. (0.078 BDT/Mlb steam) x (120,000 lb/hour) x (72 hours/year) = 674 BDT.

HAZARDOUS AIR POLLUTANT – SYNTHETIC MINOR EMISSIONS DETAIL SHEETS

Pollutant	Emissions Factors			Maximum Projected Emissions (tons/yr)[1]		
	Rate	Units	Reference	Boiler-1	Boiler-2	Total EU-1
Organic Compounds						
Acenaphthene	1.91E-07	lb/Mlb Steam	AP-42 / NCASI TB 1013	3.67E-05	3.67E-05	7.35E-05
Acenaphthylene	2.71E-06	lb/Mlb Steam	AP-42 / NCASI TB 1013	5.22E-04	5.22E-04	1.04E-03
Acetaldehyde	9.96E-04	lb/Mlb Steam	AP-42 Table 1.6-3	1.92E-01	1.92E-01	3.83E-01
Acetophenone	2.21E-06	lb/Mlb Steam	NCASI TB 1013	4.25E-04	4.25E-04	8.50E-04
Acrolein	4.20E-05	lb/Mlb Steam	ST June 2012	8.09E-03	8.09E-03	1.62E-02
Anthracene	1.70E-07	lb/Mlb Steam	AP-42 / NCASI TB 1013	3.28E-05	3.28E-05	6.56E-05
Benzene	1.80E-04	lb/Mlb Steam	ST June 2012	3.47E-02	3.47E-02	6.93E-02
Butyl Benzyl Phthalate	1.61E-05	lb/Mlb Steam	NCASI TB 1013	3.10E-03	3.10E-03	6.19E-03
Carbon Disulfide	1.50E-04	lb/Mlb Steam	NCASI TB 1013	2.89E-02	2.89E-02	5.78E-02
Carbon Tetrachloride	2.41E-05	lb/Mlb Steam	NCASI TB 1013	4.64E-03	4.64E-03	9.29E-03
Chlorine	9.48E-04	lb/Mlb Steam	AP-42 Table 1.6-3	1.82E-01	1.82E-01	3.65E-01
Chlorobenzene	1.99E-05	lb/Mlb Steam	NCASI TB 1013	3.83E-03	3.83E-03	7.67E-03
Chloroform	2.41E-05	lb/Mlb Steam	NCASI TB 1013	4.64E-03	4.64E-03	9.29E-03
Chrysene	6.96E-08	lb/Mlb Steam	AP-42 / NCASI TB 1013	1.34E-05	1.34E-05	2.68E-05
Dibutyl phthalate	4.00E-05	lb/Mlb Steam	NCASI TB 1013	7.69E-03	7.69E-03	1.54E-02
1,2-Dichloropropane (Propylene dichloride)	2.02E-05	lb/Mlb Steam	NCASI TB 1013	3.88E-03	3.88E-03	7.76E-03
Diethylphthalate	2.62E-05	lb/Mlb Steam	NCASI TB 1013	5.04E-03	5.04E-03	1.01E-02
4,6-Dinitro-o-cresol (and salts)	2.52E-06	lb/Mlb Steam	NCASI TB 1013	4.85E-04	4.85E-04	9.70E-04
p-Dichlorobenzene (1,4-Dichlorobenzene)	3.35E-04	lb/Mlb Steam	NCASI TB 1013	6.44E-02	6.44E-02	1.29E-01
2,4-Dinitrophenol	1.57E-07	lb/Mlb Steam	NCASI TB 1013	3.03E-05	3.03E-05	6.05E-05
2,4-Dinitrotoluene	1.13E-06	lb/Mlb Steam	NCASI TB 1013	2.18E-04	2.18E-04	4.35E-04
Ethyl Benzene	4.74E-04	lb/Mlb Steam	NCASI TB 1013	9.12E-02	9.12E-02	1.82E-01
Ethylene dichloride	3.50E-05	lb/Mlb Steam	NCASI TB 1013	6.75E-03	6.75E-03	1.35E-02
Fluoranthene	1.50E-06	lb/Mlb Steam	AP-42 / NCASI TB 1013	2.89E-04	2.89E-04	5.78E-04
Fluorene	3.94E-07	lb/Mlb Steam	AP-42 / NCASI TB 1013	7.58E-05	7.58E-05	1.52E-04
Formaldehyde	7.50E-04	lb/Mlb Steam	ST June 2012	1.44E-01	1.44E-01	2.89E-01
Hexachlorobenzene	1.24E-06	lb/Mlb Steam	NCASI TB 1013	2.38E-04	2.38E-04	4.76E-04
Hydrochloric Acid	2.50E-03	lb/Mlb Steam	ST June 2012	4.81E-01	4.81E-01	9.63E-01
Hydrogen Fluoride	2.82E-04	lb/Mlb Steam	NCASI TB 1013	5.43E-02	5.43E-02	1.09E-01
Methanol	9.92E-04	lb/Mlb Steam	NCASI TB 858	1.91E-01	1.91E-01	3.82E-01
2-Methyl Naphthalene	2.76E-06	lb/Mlb Steam	NCASI TB 1013	5.31E-04	5.31E-04	1.06E-03
Naphthalene	1.20E-04	lb/Mlb Steam	NCASI TB 1013	2.30E-02	2.30E-02	4.60E-02
Nickel	3.36E-06	lb/Mlb Steam	NCASI TB 1013	6.47E-04	6.47E-04	1.29E-03
4-Nitrophenol	1.13E-07	lb/Mlb Steam	NCASI TB 1013	2.17E-05	2.17E-05	4.35E-05
PCB (decachlorobiphenyl)	3.18E-10	lb/Mlb Steam	NCASI TB 1013	6.12E-08	6.12E-08	1.22E-07
PCB (dichlorobiphenyl)	8.82E-10	lb/Mlb Steam	NCASI TB 1013	1.70E-07	1.70E-07	3.40E-07
PCB (hexachlorobiphenyl)	6.54E-10	lb/Mlb Steam	NCASI TB 1013	1.26E-07	1.26E-07	2.52E-07
PCB (pentachlorobiphenyl)	1.44E-09	lb/Mlb Steam	NCASI TB 1013	2.77E-07	2.77E-07	5.54E-07
PCB (tetrachlorobiphenyl)	3.00E-09	lb/Mlb Steam	NCASI TB 1013	5.78E-07	5.78E-07	1.16E-06
PCB (trichlorobiphenyl)	3.13E-09	lb/Mlb Steam	NCASI TB 1013	6.03E-07	6.03E-07	1.21E-06
Total PCBs	9.43E-09	lb/Mlb Steam	NCASI TB 1013	1.82E-06	1.82E-06	3.63E-06
Pentachlorophenol	2.75E-07	lb/Mlb Steam	NCASI TB 1013	5.29E-05	5.29E-05	1.06E-04
Perylene	7.90E-09	lb/Mlb Steam	NCASI TB 1013	1.52E-06	1.52E-06	3.04E-06
Phenanthrene	3.14E-06	lb/Mlb Steam	AP-42 / NCASI TB 1013	6.05E-04	6.05E-04	1.21E-03
Phenol	1.92E-04	lb/Mlb Steam	NCASI TB 1013	3.70E-02	3.70E-02	7.39E-02
Propionaldehyde	3.02E-04	lb/Mlb Steam	NCASI TB 1013	5.82E-02	5.82E-02	1.16E-01
Pyrene	2.32E-06	lb/Mlb Steam	AP-42 / NCASI TB 1013	4.46E-04	4.46E-04	8.92E-04
Phosphorus and compounds	3.72E-04	lb/Mlb Steam	NCASI TB 1013	7.16E-02	7.16E-02	1.43E-01
Styrene	7.00E-06	lb/Mlb Steam	ST June 2012	1.35E-03	1.35E-03	2.70E-03
Toluene	1.10E-03	lb/Mlb Steam	AP-42 Table 1.6-3	2.13E-01	2.13E-01	4.25E-01
Vinyl Chloride	2.21E-05	lb/Mlb Steam	NCASI TB 1013	4.25E-03	4.25E-03	8.50E-03
m-Xylene	4.25E-06	lb/Mlb Steam	NCASI TB 1013	8.18E-04	8.18E-04	1.64E-03
o-Xylene	1.36E-05	lb/Mlb Steam	NCASI TB 1013	2.61E-03	2.61E-03	5.22E-03
Xylene (mixture)	6.26E-06	lb/Mlb Steam	NCASI TB 1013	1.21E-03	1.21E-03	2.41E-03
Metals						
Antimony	9.50E-06	lb/Mlb Steam	AP-42 Table 1.6-4	1.83E-03	1.83E-03	3.66E-03
Arsenic	2.60E-05	lb/Mlb Steam	AP-42 Table 1.6-4	5.01E-03	5.01E-03	1.00E-02
Beryllium	1.30E-06	lb/Mlb Steam	AP-42 Table 1.6-4	2.50E-04	2.50E-04	5.01E-04
Cadmium	4.90E-06	lb/Mlb Steam	AP-42 Table 1.6-4	9.43E-04	9.43E-04	1.89E-03
Chromium (total)	2.50E-05	lb/Mlb Steam	AP-42 Table 1.6-4	4.81E-03	4.81E-03	9.63E-03
Chromium (VI, Hexavalent)	4.20E-06	lb/Mlb Steam	AP-42 Table 1.6-4	8.09E-04	8.09E-04	1.62E-03
Cobalt	7.80E-06	lb/Mlb Steam	AP-42 Table 1.6-4	1.50E-03	1.50E-03	3.00E-03
Lead	5.80E-05	lb/Mlb Steam	AP-42 Table 1.6-4	1.12E-02	1.12E-02	2.23E-02
Manganese	4.70E-04	lb/Mlb Steam	ST June 2012	9.05E-02	9.05E-02	1.81E-01
Mercury	4.20E-06	lb/Mlb Steam	AP-42 Table 1.6-4	8.09E-04	8.09E-04	1.62E-03
Nickel	4.00E-05	lb/Mlb Steam	AP-42 Table 1.6-4	7.70E-03	7.70E-03	1.54E-02
Phosphorus	3.20E-05	lb/Mlb Steam	AP-42 Table 1.6-4	6.16E-03	6.16E-03	1.23E-02
Selenium	3.40E-06	lb/Mlb Steam	AP-42 Table 1.6-4	6.55E-04	6.55E-04	1.31E-03
				Total HAP		**4.12**
				Single HAP (Methanol)		**0.38**

[1]NOTE: Emissions calculated at maximum boiler steaming rate of 385,000 Mlb steam/year. Emission factors converted from lb/MMBtu at 1.2 MMbtu=Mlb steam.

HAZARDOUS AIR POLLUTANT – SYNTHETIC MINOR EMISSIONS DETAIL SHEETS (CONTINUED)

Pollutant	Emissions Unit	Maximum Production/ Process Rate		Emissions Factor			Maximum Projected Emissions
		Rate	Units	Rate	Units	Reference	tons/year
Acetaldehyde	EU-2 Plywood Presses	145,000	Msf-⅜″/yr	9.96E-03	lb/Msf-⅜″	ST 2018	0.72
	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	5.90E-03	lb/Msf-⅜″	AQGP-010 (90% RTO Control), EPA Region 10 (Cooling)	0.73
	EU-4 Residual Handling	145,000	Msf-⅜″/yr	3.70E-03	lb/Msf-⅜″	AQGP-010	0.27
	EU-5 Log Vaults	145,000	Msf-⅜″/yr	4.70E-03	lb/Msf-⅜″	AQGP-010	0.34
						Total Acetaldehyde	**2.06**
Acrolein	EU-2 Plywood Presses	145,000	Msf-⅜″/yr	2.40E-03	lb/Msf-⅜″	ST 2014	0.17
	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	1.30E-04	lb/Msf-⅜″	AQGP-010 (Heated Zone Only @ 90% RTO Control)	0.02
						Total Acrolein	**0.19**
Benzene	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	5.90E-05	lb/Msf-⅜″	AQGP-010 (Heated Zone Only @ 90% RTO Control)	**0.01**
Formaldehyde	EU-2 Plywood Presses	145,000	Msf-⅜″/yr	1.98E-03	lb/Msf-⅜″	ST 2014 & 2018	0.14
	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	2.40E-03	lb/Msf-⅜″	ST 2016	0.30
	EU-4 Residual Handling	145000	Msf-⅜″/yr	2.30E-03	lb/Msf-⅜″	AQGP-010	0.17
						Total Formaldehyde	**0.61**
Methanol	EU-2 Plywood Presses	145,000	Msf-⅜″/yr	7.50E-02	lb/Msf-⅜″	ST 2014 & 2018	5.44
	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	6.56E-03	lb/Msf-⅜″	ST 2016 (Heated Zone), EPA Region 10 (Cooling&Fugitives)	0.81
	EU-4 Residual Handling	145,000	Msf-⅜″/yr	2.40E-02	lb/Msf-⅜″	AQGP-010	1.74
	EU-5 Log Vaults	145,000	Msf-⅜″/yr	7.00E-03	lb/Msf-⅜″	AQGP-010	0.51
						Total Methanol	**8.5**
Methyl Isobutyl Ketone	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	5.60E-03	lb/Msf-⅜″	AP-42 Table 10.5-3 (90% RTO Control) + (Cooling Section)	**0.7**
Phenol	EU-2 Plywood Presses	145,000	Msf-⅜″/yr	2.30E-03	lb/Msf-⅜″	ST 2014 (Includes Resins & Glue Emissions)	0.17
	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	9.40E-03	lb/Msf-⅜″	AQGP-010 (90% RTO Control), EPA Region 10 (Cooling)	1.17
						Total Phenol	**1.33**
Propionaldehyde	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	2.40E-04	lb/Msf-⅜″	AQGP-010 (Heated Zone Only @ 90% RTO Control)	**0.03**
Toluene	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	1.10E-04	lb/Msf-⅜″	AQGP-010 (Heated Zone Only @ 90% RTO Control)	**0.01**
o-Xylene	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	1.40E-03	lb/Msf-⅜″	AP-42 Table 10.5-3	**0.17**
m,p-Xylene	EU-3 Veneer Dryer	248,000	Msf-⅜″/yr	2.00E-03	lb/Msf-⅜″	AQGP-010 (Heated Zone @ 90% RTO Control & Cooling)	**0.25**
						Total HAP	**13.9**
						Total Single HAP (Methanol)	**8.5**

GREENHOUSE GAS PTE AND BASELINE EMISSION DETAIL SHEET

GHG Potential to Emit (PTE)

Emission Unit	Annual Production or Process Rate		Emissions Factors			Emissions
	Rate	Units	Rate	Units	Reference	metric tons CO_2e/yr[1]
EU-1: Boiler-1	385,000,000	lb steam/yr[2]	93.8	kg CO_2/MMBtu	Table C-1 to Subpart C of 40 CFR Part 98	59,112
			0.0072	kg CH_4/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	113
			0.0036	kg N_2O/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	676
EU-1: Boiler-2	385,000,000	lb steam/yr	93.8	kg CO_2/MMBtu	Table C-1 to Subpart C of 40 CFR Part 98	59,112
			0.0072	kg CH_4/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	113
			0.0036	kg N_2O/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	676
EU-3: RTO Natural Gas Combustion	87,600,000	scf/yr[3]	53.06	kg CO_2/MMBtu	Table C-1 to Subpart C of 40 CFR Part 98	4,769
			0.001	kg CH_4/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	2.2
			0.0001	kg N_2O/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	2.7
					Total GHG (metric tons)	**124,577**
					Total GHG (short tons)	**137,323**

GHG 2010 Baseline

Emission Unit	Annual Production or Process Rate		Emissions Factors			Emissions
	Rate	Units	Rate	Units	Reference	metric tons CO_2e/yr[1]
EU-1: Boiler-1 & Boiler-2	611,276	MMBtu/yr[4]	93.8	kg CO_2/MMBtu	Table C-1 to Subpart C of 40 CFR Part 98	57,338
			0.0072	kg CH_4/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	110
			0.0036	kg N_2O/MMBtu	Table C-2 to Subpart C of 40 CFR Part 98	656
					Total GHG (metric tons)	**58,103**
					Total GHG (short tons)	**64,048**

[1]NOTE: Global Warming Potentials of one (1) for CO_2, 25 for CH_4, and 298 for N_2O were used to convert emissions to CO_2e.
[2]NOTE: The steaming rate of the boiler was converted to MMBtu using the ratio of the boiler's maximum rated heat input capacity to its design rated steam output capacity, equaling 0.00164 MMBtu/lb steam.
[3]NOTE: Standard cubic feet (scf) of natural gas combusted was converted to MMBtu using the conversion in Table C-1 to Subpart C of 40 CFR Part 98 for natural gas of $1.026x10^{-3}$ MMBtu/scf.
[4]NOTE: 2010 reported baseline value of 34,970 tons of hog fuel burned was converted to MMBtu using the conversion in Table C-1 to Subpart C of 40 CFR Part 98 for solid biomass fuels – wood and wood residuals of 17.48 MMBtu/short ton.

MILL EQUIPMENT (EU-4) EMISSION FACTOR DETERMINATION DETAIL SHEET

Particulate Matter (PM) Emission Factor Estimates for EU-4

Device/Process	PM Emission Rate		Emission Factor		
	Rate	Units	Rate	Units	Notes
Baghouse-2	8.5	tons	0.00105	lb/Msf-⅜" plywood	Emission rate calculated by summing 1978 baseline emissions from Cyclones #2, #3 & #4. Emission factor includes assumed 99.9% emission reduction through the baghouse. Process rate = 163,000 Msf-⅜" plywood per year from the 1978 baseline year.
Baghouse-3	8.5	tons	0.00105	lb/Msf-⅜" plywood	Emission rate calculated by summing 1978 baseline emissions from Cyclones #2, #3 & #4. Emission factor includes assumed 99.9% emission reduction through the baghouse. Process rate = 163,000 Msf-⅜" plywood per year from the 1978 baseline year.
Cyclone #8	2.8	tons	0.034	lb/Msf-⅜" plywood	Emission rate is the 1978 baseline emissions for Cyclone #6. Emission factor has no control efficiency included. Process rate = 163,000 Msf-⅜" plywood per year from the 1978 baseline year.

Simplified Permit Emission Factors for EU-4 to Demonstrate PSEL Compliance

Emissions Unit	Pollutant	Permit Emission Factor	Emission Factor Units	Annual Emissions (ton/yr)		Annual Emissions Using Individual EU-4 EFs (ton/yr)	Difference (ton/yr)
Mill Equipment (EU-4)	PM	0.05	lb/Msf-⅜" plywood	3.6		3.3	0.3
	PM_{10}	0.04	lb/Msf-⅜" plywood	2.9		2.9	0.02
	$PM_{2.5}$	0.025	lb/Msf-⅜" plywood	1.8		1.5	0.3
	VOC	0.27	lb/Msf-⅜" plywood	19.6		19.3	0.3

EMISSION UNIT EQUIPMENT LIST AND ASSOCIATED CONTROL DEVICES DETAIL SHEET

Emission Unit	Device ID	Date Installed	Specifications	Emission Control(s)
EU-1: Boiler-1	B-1	1939	• Steam Rating: 60,000 lb steam/hr • Rated Heat Input Capacity: 71.94 MMBtu/hr • Max Steam Pressure: 200 psig • Max Steam Temperature: 388˚F	Multiclone (MC-1)
EU-1: Boiler-2	B-2	1940	• Steam Rating: 60,000 lb steam/hr • Rated Heat Input Capacity: 71.94 MMBtu/hr • Max Steam Pressure: 200 psig • Max Steam Temperature: 388˚F	Multiclone (MC-2)
EU-2: Press #1	P-1	2016	• Production Capacity: 14.0 Msf-1⅛″/hr • Product Thickness: ¼″ – 1 ⅛″ • Max Board Dimensions: 48″ x 96″ • Heat Source: Steam • Resin Content: 25-32% • Press Temp: 56 – 308˚F • Press Cycle Time: 3 – 14 minutes	None
EU-2: Press #2	P-2	2016	• Production Capacity: 14.0 Msf-1⅛″/hr • Product Thickness: ¼″ – 1 ⅛″ • Max Board Dimensions: 48″ x 96″ • Heat Source: Steam • Resin Content: 25-32% • Press Temp: 56 – 308˚F • Press Cycle Time: 3 – 14 minutes	None
EU-2: Press #3	P-3	2016	• Production Capacity: 14.0 Msf-1⅛″/hr • Product Thickness: ¼″ – 1 ⅛″ • Max Board Dimensions: 48″ x 96″ • Heat Source: Steam • Resin Content: 25-32% • Press Temp: 56 – 308˚F • Press Cycle Time: 3 – 14 minutes	None
EU-2: Press #4	P-4	2016	• Production Capacity: 14.0 Msf-1⅛″/hr • Product Thickness: ¼″ – 1 ⅛″ • Max Board Dimensions: 48″ x 96″ • Heat Source: Steam • Resin Content: 25-32% • Press Temp: 56 – 320˚F • Press Cycle Time: 3 – 14 minutes	None
EU-2: Press #5	P-5	2016	• Production Capacity: 14.0 Msf-1⅛″/hr • Product Thickness: ¼″ – 1 ⅛″ • Max Board Dimensions: 48″ x 96″ • Heat Source: Steam • Resin Content: 25-32% • Press Temp: 56 – 308˚F • Press Cycle Time: 3 – 14 minutes	None
EU-3: Veneer Dryer #1	VD-1	2016	• Production Capacity: 60 Msf-⅜″/hr • Manufacturer: Raute • Dryer Type: Jet • Decks: 6 • Zones: 24 hot, 4 cooling • Heat Source: Steam	RTO
EU-3: Veneer Dryer #2	VD-2	1960 Modified in 2008 and 2016	• Production Capacity: 22 Msf-⅜″/hr • Manufacturer: COE • Dryer Type: Jet • Decks: 4 • Zones: 12 heated & 3 cooling • Heat Source: Steam	RTO

EMISSIONS CONTROL DEVICE LIST DETAIL SHEET

PCD ID	Description	Design Parameters
MC-1 & MC-2	Multiclone #1 & Multiclone #2 [Control PM emissions from Hogged Fuel Boiler-1 (MC-1) and Boiler-2 (MC-2)]	• Installed: 1968 • Rated Efficiency: 90% • Mfg./model no.: Flyash Arrestor Corp./Whirlex Dust Collector • Multiclone Diameter: 9” • Multiclone Length (MC-1): 32” • Multiclone Length (MC-2): 84” • Design Inlet Gas Flow Rate: 89,150 acfm • Design Pressure Drop: 2.3” draft loss • Collected flyash is reinjected into the boiler after being screened to remove inorganic debris.
RTO	Regenerative Thermal Oxidizer	• Installed 2016 • Rated efficiency (VOC): 90% • Mfg./Model No.: TKS 40,000 • Design inlet gas flow rate: 40,000 acfm • Design temperature: 1200 to 1600 degrees F
Bag-1	Baghouse #1 [Controls PM from various saws and routers]	• Installed: 2016 • Rated efficiency: 99.9% • Mfg./Model Number: CSL/465-12 • Design inlet gas air flow: 60,000 acfm • Design air-to-cloth ratio: 6:1 • Design pressure drop: 12” water optimum static pressure • Cleaning mechanism and frequency: Continuous compressed air
Bag-2	Baghouse #2 [Controls PM emissions from Panel Sanding Line]	• Installed: 2016 • Rated efficiency: 99.9% • Mfg./Model Number: CSL/BV-TR 16-10 • Design inlet gas air flow: 935 acfm • Design air-to-cloth ratio: 4:1 • Design pressure drop: 4” water • Collected material is transferred to the Sander Dust Fuel Silo • Cleaning mechanism and frequency: Continuous compressed air
Bag-3	Filter #3 [Controls PM emissions from the Plywood Belt Sanders]	• Installed: 2016 • Rated efficiency: 99.9% • Mfg./Model Number: CSL/376-RF 10 • Design inlet gas air flow: 40,000 acfm • Design air-to-cloth ratio: 6:1 • Design pressure drop: 12” water • Cleaning mechanism and frequency: Continuous compressed air