

**Lane Regional Air Protection Agency
Standard Air Contaminant Discharge Permit**

Review Report

Seneca Sawmill Company

90201 Highway 99N

Eugene, Oregon 97402

Website: <https://senecasawmill.com/>

Permit No. 207459

Source Information:

Primary SIC	2421 - Sawmill/Planing Mill
Secondary SIC	--
Primary NAICS	321113 - Sawmills
Secondary NAICS	--
Source Categories (LRAPA title 37,	B:62. – Sawmills and/or planing mills 25,000 or

Table 1)	more board feet/maximum 8 hour finished product C. 5. – All sources having the potential to emit more than 100 tons or more of any regulated pollutant, except GHG, in a year
Public Notice Category	II

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	Y
Emission Credits	N
Special Conditions	N
Compliance Schedule	N

Source Test [date(s)]	N
COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	3/1
SACC (due date)	3/1, 9/1
GHG Report (due date)	3/31
Quarterly Report (due date)	N

Monthly Report (due dates)	N
Excess Emissions Report	Y
Other Reports (due date) - Title 44 Report	2/15

Air Programs

NSPS (list subparts)	Dc, IIII
NESHAP (list subparts)	A, ZZZZ, DDDD, DDDDD
CAM	N
Regional Haze (RH)	N
TACT	N
40 CFR part 68 Risk Management	N
Cleaner Air Oregon	Y
Synthetic Minor (SM)	N
SM-80	N

Title V	Y
Major FHAP Source	Y
Federal Major Source	N
Type A State New Source Review	N
Type B State New Source Review	N
Prevention of Significant Deterioration (PSD)	N
Nonattainment New Source Review (NNSR)	N

Permittee Identification

1. Seneca Sawmill Company. ("the facility" or "SSC") operates a sawmill at 90201 Highway 99 North, Eugene, Oregon. The facility began operation at this location in 1954.

General Background

2. The current facility uses up to five (5) baghouses and one (1) target box with filter to control particulate matter emissions from sawmill and planing mill activities. The facility has eight (8) dry kilns for reducing the moisture content of green dimensional and stud lumber. The facility has one (1) installed 50 MMBtu per hour natural gas-fired boiler and is authorized to construct two (2) more identical natural gas-fired boilers to provide steam for the dry kilns. The facility also has an emergency generator for the administrative building and a gasoline dispensing facility (GDF) consisting of a 6,000 gallon tank and a 2,000 gallon tank.
3. The facility was acquired by Sierra Pacific Industries (SPI), a forest products company based in Anderson, California, in 2021. SPI owns and manages more than 2.3 million acres of timberland in California, Oregon and Washington and is one of the largest U.S. lumber manufacturers.
4. The facility is located on property that was previously contiguous with a facility last known as Tree Products Manufacturing Company, Inc. (Permit No. 208264). This facility consisted of a hardwood mill, kilns and a boiler. SSC purchased this facility in April 1993. LRAPA subsequently merged the two (2) facilities under the Seneca Sawmill permit identification number. The baselines for the two (2) facilities were also merged.
5. SSC is contiguous with Seneca Sustainable Energy ("SSE" – Permit No. 206470). The two (2) facilities are considered to be separate sources, as this term is defined in title 12, because while they are located on contiguous or adjacent properties and are owned or operated by the same person or by persons under common control, their primary business activities do not belong to the same two-digit SIC code. LRAPA has previously determined that SSC is not a support facility for SSE because SSC does not provide at least 50% of the cellulosic biomass combusted by SSE on an annual basis.
6. SSC and SSE are considered one source for the purposes of determining whether the facilities are a major source of federal hazardous air pollutants (FHAP), as defined in title 12, because they are located within a contiguous area and are under common control. SSC is considered a major source of FHAP as of the issuance of the Standard ACDP dated 09/20/2022.

Type 3 Modification

7. On January 15, 2024, the facility submitted an application to upgrade and modernize the sawmill operations. The proposed changes are considered a Type 3 change under subsection 34-035(3) and require a modification of the existing Standard ACDP. The proposed facility modification includes:
 - 7.a. The four (4) existing stud dry kilns will be replaced with eight (8) new stud dry kilns. The four (4) existing dimensional dry kilns will remain unchanged. There will be 12 dry kilns total at the site after the modification is complete. The authority to construct two (2) dry kilns under the Standard ACDP dated 09/20/2022 has been superseded by this request.
 - 7.b. The sawmill and planing activities will be relocated, replaced, rebuilt and/or reconfigured, and include the following changes in control devices:
 - 7.b.i. The previously authorized Mill A Planer Baghouse No. 2 (EP-02B) will not be built.
 - 7.b.ii. The Stud Mill Sawdust Baghouse (EP-06) will be relocated but otherwise remain unchanged.
 - 7.b.iii. The Stud Mill Planer Shaving Baghouse (EP-06) will be replaced with a new baghouse in a different location.
 - 7.b.iv. The Mill A Sawdust Baghouse (EP-08) will be re-purposed to serve the Planer Trim Saw Sawdust.
 - 7.c. The Planer Knife Grinding Cyclone (EP-04) and Mill A Grinder Cyclone (EP-07) will be removed. A new Mill Grinding Cyclone and Baghouse (EP-013) will replace the Mill A

- Grinder Cyclone (EP-07) in a new location.
- 7.d. A new fabrication shop will be constructed in the northwest corner of the property. The significant emission units in the new fabrication shop will include
 - 7.d.i. A paint booth (EP-015) for maintenance and project related painting.
 - 7.d.ii. A plasma cutting table for fabrication support activities. The plasma cutting table will include an accessory oxy-acetylene torch head for cutting thicker materials.
 - 7.d.iii. General welding activities will be performed in the fabrication shop for maintenance purposes.
 - 7.e. A new 12,000 gallon diesel fuel tank will be installed for on-site mobile equipment use. This emission unit is considered a categorically insignificant activity under title 12
8. As part of this modification, the facility has proposed the following administrative changes:
- 8.a. The dry kilns will be renumbered to K1 – K12, with the unmodified existing dimensional dry kilns being known as K1 – K4 and the eight (8) new stud dry kilns being known as K5 – K12.
 - 8.b. The Mill A Planer Baghouse No. 1 (EP-02A) will be renamed the Dimension Planer Baghouse (EP-02).
 - 8.c. The Stud Mill Baghouse (EP-05) will be renamed the Stud Mill Planer Baghouse No. 1.
 - 8.d. The Stud Mill Planer Shaving Baghouse (EP-06) will be renamed the Stud Mill Planer Baghouse No. 2.
 - 8.e. The Mill A Sawdust Baghouse (EP-08) will be renamed the Planer Trim Saw Sawdust Baghouse.

Reasons for Permit Action and Fee Basis

9. The facility operates a process listed in title 37, Table 1, Part B (B.62, Sawmills and/or planing mills 25,000 or more board feet/maximum 8 hour finished product) and is, therefore, required to obtain an air contaminant discharge permit. The current Standard ACDP for the facility was issued on September 20, 2022. The modifications requested by the facility will require a modification of the current Standard ACDP.
10. The modification request is considered a Type 3 change under subsection 34-035(3). This modification is considered a Non-PSD/NSR Moderate Technical Permit Modification under section 37-8020, Table 2, Part 4. Specific Activity Fees.

Attainment Status

11. The facility is located in an area that has been designated as attainment or unclassified for all criteria pollutants. The facility is inside the Eugene-Springfield UGB as defined in LRAPA 29-0010 which designates the Eugene-Springfield CO and PM₁₀ maintenance areas. The facility is also located inside the Eugene-Springfield UGB as described in the current Eugene-Springfield Metropolitan Area General Plan, as amended. The facility is located within 100 kilometers of three (3) Class I air quality protection areas: Diamond Peak Wilderness, Mount Washington Wilderness and Three Sisters Wilderness area.

Permitting History

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

Date Approved/Valid	Permit Action Type	Description
01/01/1979 – 12/31/1984	ACDP	--
01/01/1985 – 12/31/1994	ACDP	--
01/26/1996 – 01/25/2001	SM ACDP	Added synthetic minor conditions
06/19/1998	ACDP Addendum No. 1	Added baghouse
01/26/2001 – 01/25/2006	ACDP	Renewal
01/26/2006 – 01/25/2011	ACDP	Renewal
05/12/2009	ACDP Addendum No. 1	Change the permit type and fee basis
09/04/2009	ACDP Modification	Technical permit modification to include FHAP

Date Approved/Valid	Permit Action Type	Description
		limitations
09/26/2011 – 09/26/2016	ACDP	Renewal
12/03/2012	ACDP Addendum No. 1	Add one (1) dry kiln
01/22/2013	ACDP Addendum No. 2	Add the word “shall” in the first sentence of Condition 7.a.
04/07/2015 – 04/07/2020	ACDP	Renewal and Non-NSR/PSD complex technical modification
09/30/2020	NC-207459-A20	Approval to Construct two (2) dry kilns
10/26/2020	ACDP Addendum No. 1	Add two (2) dry kilns
01/04/2021	NC-207459-B20	Approval to Construct two (2) baghouses to control emissions from EP-05 at Stud Mill and EP-08 at Mill A
09/20/2022	ACDP	Renewal and Type 4 change due to facility expansion and boiler installation.
Upon Issuance	ACDP Addendum No. 1	Type 3 change.
Upon Issuance	Title V	Initial Title V Operating Permit.

Existing Emission Unit Descriptions

13. The existing emission units regulated by the permit are the following:

Emission Unit ID	Emission Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
Significant Emission Units			
MH	Sawmill/Planing Mill Activities	Main Baghouse (EP-01) Mill A Planer Baghouse No. 1 (EP-02A) Stud Mill Sawdust Baghouse (EP-05) Stud Mill Planer Shaving Baghouse (EP-06) Mill A Sawdust Baghouse (EP-08) One (1) Target Box with Filter (EP-11)	<2015 <2015 <2015 <2015 <2015 <2015
K1	Dimensional Dry Kiln	None	>2015
K2	Dimensional Dry Kiln	None	>2015
K3	Dimensional Dry Kiln	None	>2015
K4	Dimensional Dry Kiln	None	>2015
K5	Stud Dry Kiln (S1)	None	2011
K6	Stud Dry Kiln (S2)	None	2012
K7	Stud Dry Kiln (S3)	None	2014
K8	Stud Dry Kiln	None	>2015
Boiler-3	One (1) 50 MMBtu/hr Natural Gas-Fired Boiler	None	2016
Boiler-4	One (1) 50 MMBtu/hr Natural Gas-Fired Boiler	None	TBI
Boiler-5	One (1) 50 MMBtu/hr Natural Gas-Fired Boiler	None	TBI
GDF	Gasoline Dispensing Facility	None	1980's
Categorically Insignificant Activities			
CIA-1	Diesel-Fired 150 kW Emergency Generator	None	2016
CIA-2	Diesel Storage Tanks	None	1980's

14. Sawmill/Planing Mill Activities

The existing board cutting and planing activities generate particulate matter in the form of wood

dust and shavings. The particulate matter emissions from these processes are controlled by up to five (5) baghouses and one (1) target box with filter. The criteria pollutant emissions from these sources are based on emission factors from Table 13.2 of the DEQ General ACDP for sawmills, planing mills, millwork, plywood manufacturing, and/or veneer drying (AQGP-010 expiring 10/01/2027). These sources are not expected to have any significant FHAP or CAO TAC emissions.

15. Four (4) Dimensional Dry Kilns and Four (4) Stud Dry Kilns

The facility currently uses four (4) dry kilns to dry dimensional lumber and four (4) dry kilns to dry stud lumber. As part of the 2022 ACDP renewal and modification, the facility requested the authority to install two (2) additional dry kilns for stud lumber. The two (2) additional dry kilns will not be built under this authority. The criteria pollutant, FHAP and CAO TAC emissions from these processes are based on emission factors from DEQ AQ-EF09 – DEQ HAP and VOC Emission Factors for Lumber Drying, 2021.

16. One (1) 50 MMBtu/hr Natural Gas-Fired Boiler (Boiler-3)

One (1) 50 MMBtu/hr Natural Gas-Fired Boiler (Boiler-4)

One (1) 50 MMBtu/hr Natural Gas-Fired Boiler (Boiler-5)

The facility currently uses one (1) 50 MMBtu/hr boiler (Boiler-3) installed in 2016 to dry dimensional lumber if SSE is not operational. As part of the 2022 ACDP renewal and modification, the facility was authorized to install two (2) additional natural gas-fired boilers rated at 50 MMBtu/hr each, to be known as Boiler-4 and Boiler-5. Each boiler is capable of generating 40,000 pounds per hour of steam. These boilers will be used to dry dimensional lumber if SSE is not operational. The criteria pollutant emissions from these sources are based on emission factors derived from DEQ AQ-EF05 – Emission Factors Gas Fired Boilers, EPA 40 CFR part 98, Tables C-1 and C-2, and manufacturer's guarantees. The FHAP or CAO TAC emissions from these sources are based on emission factors from DEQ's 2020 ATEI Combustion EF Tool.

17. One (1) Gasoline Dispensing Facility

The facility has one (1) 6,000 gallon gasoline tank and one (1) 2,000 gallon gasoline tank that are used to fuel company vehicles. These tanks represent one (1) gasoline dispensing facility (GDF). The criteria pollutant, FHAP and CAO TAC emissions from this source are based on emission factors developed by LRAPA that take into account the percentage of vehicles in Lane County equipped with Onboard Refueling Vapor Recovery.

New or Modified Emission Units

18. The new or modified emission units regulated by the permit after completion of the modification are the following:

Emission Unit ID	Emission Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
Significant Emission Units			
MH	Sawmill/Planing Mill Activities	Main Baghouse (EP-01)	<2015
		Dimensional Planer Baghouse No. 1 (EP-02)	<2015
		Stud Mill Planer Baghouse No. 1 (EP-05)	TBI
		Stud Mill Planer Baghouse No. 2 (EP-06)	TBI
		Planer Trim Saw Sawdust Baghouse (EP-08)	TBI
		One (1) Target Box with Filter (EP-11)	TBI
K5-K12	Eight (8) Stud Dry Kilns	None	TBI
MG	Mill Grinding	Mill Grinding Cyclone and Baghouse (EP-013)	TBI
Aggregate Insignificant Activities			
AIA-1	Plasma Table with Torch	Semi-dry Plasma Table	TBI
AIA-2	Paint Booth	Dry filters	TBI
AIA-3	Welding and Fabrication	None	TBI
Categorically Insignificant Activities			

Emission Unit ID	Emission Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
CIA-2	Diesel Storage Tanks	None	None

19. Sawmill/Planing Mill Activities

The facility is proposing to relocate, replace, rebuild and/or reconfigure the sawmill/planing mill activities at the facility. These activities generate particulate matter in the form of wood dust and shavings. The particulate matter emissions from these modified processes will be controlled by up to five (5) baghouses and one (1) target box with filter. The emission units controlled by EP-01 and EP-02 are not considered modified for regulatory applicability purposes, but are listed in the table above for convenience. The criteria pollutant emissions from these sources are based on emission factors from Table 13.2 of the DEQ General ACDP for sawmills, planing mills, millwork, plywood manufacturing, and/or veneer drying (AQGP-010 expiring 10/01/2027). These sources are not expected to have any significant FHAP or CAO TAC emissions.

20. Eight (8) Stud Dry Kilns

The facility currently uses four (4) dry kilns to dry dimensional lumber and four (4) dry kilns to dry stud lumber. As part of the modification, the facility will be replacing the four (4) existing stud kilns with eight (8) new stud kilns in a new location. The throughput capacity of a single new stud dry kiln will be equivalent to the throughput of a single existing stud dry kiln. The steam for the dry kilns is primarily provided by SSE. The facility will use on-site natural-gas fired boilers to generate steam when SSE is not operational. The criteria, FHAP and CAO TAC emissions from these sources are based on emission factors from DEQ AQ-EF09 – DEQ HAP and VOC Emission Factors for Lumber Drying, 2021.

21. Mill Grinding

The facility currently sharpens cutting blades at the facility using grinding wheels. This process was previously considered a Categorically Insignificant Activity. As part of the modification, the facility intends to reconfigure this process and exhaust the grinding operations to a proposed Mill Grinding Cyclone and Baghouse (EP-013). The particulate matter emissions from this process assume an exit grain loading of 0.005 gr/dscf and a maximum baghouse airflow of 5,600 cubic feet per minute. The FHAP and CAO TAC emissions are based on lab sampling of the existing cyclone control device catch as a mass fraction that is multiplied against the potential PM emissions from the process. The hexavalent chromium content is assumed to be 5% of the total chromium content based on EPA's NEI Augmentation Profile Factors for NAICS 332212 Hand and Edge Tool Manufacturing.

Plasma Table with Torch

22. The facility is proposing to install a plasma cutting table for fabrication support activities in a proposed fabrication shop. The plasma cutting table will include an accessory oxy-acetylene torch to cut thicker materials. The plasma cutting will occur directly above a water table which reduces emissions from the process. The criteria pollutant, FHAP and CAO TAC emissions from this source are based on "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel" by Bromsen B. et al. (1994). Only mild steel will be cut using this process. This process is considered an aggregate insignificant activity under the Standard ACDP and a Toxic Emission Unit under Cleaner Air Oregon.

Paint Booth

23. The facility is proposing to install a paint booth in a proposed fabrication shop for maintenance and project-related painting. The transfer efficiency of the paint spray guns is assumed to be at least 65% based on the use of high volume, low pressure (HVLP), airless, air-assisted airless (AAA), electrostatic spray gun technology or other spray gun technology that achieves a similar transfer efficiency as approved in writing by LRAPA. The criteria pollutant, FHAP, and CAO TAC emissions from this source are based on the materials the facility proposes to use and the limitations on throughput requested by the facility. This process is considered an aggregate insignificant activity

under the Standard ACDP and a Toxic Emission Unit under Cleaner Air Oregon.

Welding and Fabrication

24. The facility is proposing to perform welding in a proposed fabrication shop. The welding criteria pollutant, FHAP and CAO TAC emission factors are based on DEQ's 2020 Air Toxics Emissions Inventory Welding Emission Factor Search Tool. For CAO TACs not in the tool, the facility used the San Diego Air Pollution Control District's Welding Operations methodology to develop emissions estimates. This process is considered an aggregate insignificant activity under the Standard ACDP and a Toxic Emission Unit under Cleaner Air Oregon.

Diesel Storage Tanks

25. The facility is proposing to add a new 12,000 gallon diesel storage tank to the existing collection of on-site fuel storage tanks. This additional diesel storage tank will not change the categorically insignificant activity status of this process. As such, no emissions from the new diesel storage tank have been quantified.

Nuisance, Deposition and Other Emission Limitations

26. Under subsection 49-010(1), the permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.
27. Under section 32-055, the permittee must not cause or permit the emission of particulate matter which is larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.
28. Under subsection 32-090(1), the permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property; such determination is to be made by LRAPA. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

Emission Limitations and Monitoring

29. The facility is subject to the general requirements for fugitive emissions under section 48-015. The facility must not have visible emissions that leave the property of a source for a period or periods totaling more than 18 seconds in a six (6) minute period. The facility must follow, but is not limited to, the list of reasonable precautions under paragraphs 48-015(1)(a)-(g). Compliance will be demonstrated through a survey of facility fugitive emissions using EPA Method 22 to be completed at least once a month. The permittee is required to take corrective action if any visible emissions are identified. If requested by LRAPA, the facility must develop a fugitive emission control plan.
30. The facility is subject to the visible emission limitations under subsection 32-010(3). For sources, other than wood-fired boilers, no person may emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity. Compliance is demonstrated through a plant survey of visible emissions using EPA Method 22 to be completed at least once a month. The permittee is required to take corrective action if any visible emissions are identified, and contact LRAPA or conduct a US EPA Method 9 test if the visible emissions cannot be eliminated. In addition, the permittee must prepare and maintain an Operation & Maintenance Plan (O&M Plan) for all particulate matter emission control devices at the facility as discussed in Item 39.
31. The non-fuel burning equipment at this source that emit particulate matter are subject to particulate matter emission limitations under subsection 32-015(2):
- 31.a. For sources installed, constructed, or modified on or after June 1, 1970 but prior to April 16, 2015 for which there are not representative compliance source test results, the particulate

- matter emission limit is 0.14 grains per dry standard cubic foot; and
- 31.b. For sources installed, constructed, or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot.
32. Compliance demonstration with the particulate matter emission limitations under Item 31 will include:
- 32.a. Sawmill/Planing Mill Activities: The permittee must control particulate matter emissions from these activities using baghouse(s) and a target box. The permittee must monitor and record pressure drop across each baghouse controlling particulate matter emissions at least once per week. If the pressure drop is not within the operating range listed in the permit, the permittee must take corrective action. The permittee must prepare and maintain an O&M Plan for each particulate matter emission control device associated with this process as discussed in Item 39.
- 32.b. Dry Kilns: The permittee must perform a plant survey of visible emissions as discussed in Item 30 that includes these emission units.
- 32.c. Mill Grinding: The permittee must control particulate matter emissions from this emission unit using a baghouse. The permittee must monitor and record pressure drop across the baghouse controlling particulate matter emissions from this emission unit at least once per week. If the pressure drop is not within the operating range listed in the permit, the permittee must take corrective action. The permittee must prepare and maintain an O&M Plan for each particulate matter emission control device associated with this process as discussed in Item 39.
- 32.d. Insignificant Emission Units: Categorically insignificant activities and aggregate insignificant activities do not require the same level of compliance demonstration as significant emission units. Compliance for these emission units with the particulate matter emission limitation, as applicable, will be demonstrated by compliance with the visible emission limitations as discussed in Item 30.
33. The facility is subject to the process weight rate emission limitations under subsection 32-045(1) for any emission unit that has the potential to emit particulate matter. No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials.
34. Compliance demonstration with the process weight rate emission limitations under Item 33 will include:
- 34.a. Sawmill/Planing Mill Activities: The permittee must control particulate matter emissions from these activities using baghouse(s) and a target box. The permittee must monitor and record pressure drop across each baghouse controlling particulate matter emissions at least once per week. If the pressure drop is not within the operating range listed in the permit, the permittee must take corrective action. The permittee must prepare and maintain an O&M Plan for each particulate matter emission control device associated with this process as discussed in Item 39.
- 34.b. Dry Kilns: The permittee must perform a plant survey of visible emissions as discussed in Item 30 that includes these emission units.
- 34.c. Mill Grinding: The permittee must control particulate matter emissions from these emission unit using a baghouse. The permittee must monitor and record pressure drop across the baghouse controlling particulate matter emissions from this emission unit at least once per week. If the pressure drop is not within the operating range listed in the permit, the permittee must take corrective action. The permittee must prepare and maintain an O&M Plan for each particulate matter emission control device associated with this process as discussed in Item 39.
- 34.d. Insignificant Emission Units: Categorically insignificant activities and aggregate insignificant activities do not require the same level of compliance demonstration as significant emission units. Compliance for these emission units with the particulate matter emission limitation, as

applicable, will be demonstrated by compliance with the visible emission limitations as discussed in Item 30.

35. The new and modified emission units at the facility were required under the modification of the Standard ACDP to demonstrate that the modification will not cause or contribute to a new exceedance of a NAAQS adopted under title 50. The modification of the Standard ACDP included PM_{2.5} emission limitations and associated monitoring and recordkeeping for all emission units included in the air quality modeling, including Emission Unit K5 through K12, Emission Points EP05, EP06, and EP08 from Emission Unit MH, Emission Unit MG, Emission Unit AIA-1, Emission Unit AIA-2, and Emission Unit AIA-3.
36. Compliance demonstration with the PM_{2.5} emission limitations under Item 35 will include:
 - 36.a. Emission Points EP05, EP06, and EP08 from Emission Unit MH: The permittee must control particulate matter emissions from these emission unit using a baghouse. The permittee must monitor and record pressure drop across each baghouse controlling particulate matter emissions at least once per week. If the pressure drop is not within the operating range listed in the permit, the permittee must take corrective action. The permittee must prepare and maintain an O&M Plan for each particulate matter emission control device associated with this process as discussed in Item 39.
 - 36.b. Emission Unit K5 through K12: The permittee must keep and maintain documentation of the calculation of the maximum hourly particulate matter emission rate from each emission unit K5 through K12.
 - 36.c. Emission Unit MG: The permittee must control particulate matter emissions from these emission unit using a baghouse. The permittee must monitor and record pressure drop across the baghouse controlling particulate matter emissions from this emission unit at least once per week. If the pressure drop is not within the operating range listed in the permit, the permittee must take corrective action. The permittee must prepare and maintain an O&M Plan for each particulate matter emission control device associated with this process as discussed in Item 39.
 - 36.d. Insignificant Emission Units:
 - 36.d.i. Emission Unit AIA-1: The permittee must keep records of the total daily hours the plasma table with torch cuts metal for each day of operation and documentation of important production factors that affect the potential PM_{2.5} emissions from this process.
 - 36.d.ii. Emission Unit AIA-2: The permittee must keep records of total number of gallons of coating used for each day the paint booth is operated and documentation of important production factors that affect the potential PM_{2.5} emissions from this process.
 - 36.d.iii. Emission Unit AIA-3: The permittee must keep records of total number of pounds of welding wire/rod used in any day and documentation of important production factors that affect the potential PM_{2.5} emissions from this process .
37. Boiler-3, Boiler-4, and Boiler-5 are subject to particulate matter emission limitations under subsection 32-030(2). For sources installed, constructed, or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance with this limitation will be demonstrated through compliance with the requirements of 40 CFR part 63 subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (as discussed later in this review report) and limiting these emission units to only combusting natural gas.
38. The GDF is subject to the requirements under OAR 340-244-0231 through OAR 340-244-0252. As defined under this regulation, the GDF is considered an existing GDF. The facility is regulated as a GDF 3 because the annual throughput of gasoline is at least 120,000 gallons but less than 600,000 gallons. Because the GDF is considered an existing GDF, the GDF is subject to work practice and submerged fill requirements.

39. Under section 32-007, the facility must prepare an O&M Plan for each particulate matter control device at the facility. If the O&M Plan is updated, the facility must submit the updated copy to LRAPA for review. If LRAPA determines the plan is deficient, LRAPA may require the facility to amend the plan. At minimum, the O&M Plan must include inspection schedules for each baghouse and target box. The O&M Plan must identify procedures for recording the date and time of any inspections, identification of the equipment inspected, the results of the inspection, and the actions taken if repairs or maintenance are necessary.

Typically Achievable Control Technology (TACT)

40. Subsection 32-008(1) requires an existing unit at a facility prior to January 1, 1994, meet TACT if the emission unit meets the following criteria: The emission unit is not already subject to emission standards for the regulated pollutant under title 30, title 33, title 38, or title 46 at the time TACT is required; the source is required to have a permit; the emission unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment.
- 40.a. The following emission units are not subject to TACT because they do not have emissions equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant: the existing GDF.
41. Subsection 32-008(2) requires new units installed or existing emission units modified on or after January 1, 1994, meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or Type A State NSR in title 38, and applicable NSPS in title 46, or any other standard applicable to only new or modified sources in title 30, title 33, title 39, or title 46 for the regulated pollutant; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT
- 41.a. The following emission units are not subject to TACT because they do not have emissions of any criteria pollutant equal to or greater than one (1) ton per year: Categorically Insignificant Activities, Aggregate Insignificant Activities.
- 41.b. The existing and modified Sawmill/Planing Mill Activities consists of a number of emission units merged together for convenience of regulation. Most of the emission units included under the Sawmill/Planing Mill Activities category will not have emissions of any criteria pollutant equal to or greater than one (1) ton per year. The emissions from the Rail Chip Bin Target Box will have emissions of particulate matter equal to or greater than one (1) ton per year. While LRAPA has not performed a formal TACT determination for particulate matter from this emission unit, LRAPA has determined that the controls associated with this process likely meet TACT.
- 41.c. The existing and proposed dry kilns have emissions of VOC equal to or greater than one (1) ton per year. While LRAPA has not performed a formal TACT determination for VOC from these emission units, US EPA and LRAPA have determined that there are no control technologies currently used in practice or economically feasible for these dry kilns. TACT is considered to be current operations.
- 41.d. Boiler-3, Boiler-4, and Boiler-5 will combust only natural gas and are or will be equipped with low NO_x burners that reduce NO_x and CO emissions. NO_x and CO emissions are the only regulated pollutants from these emission units that may be equal to or greater than one (1) ton per year. While LRAPA has not performed a formal TACT determination for NO_x and CO from these emission units, LRAPA has determined that low NO_x burners likely meet TACT for boilers of this size.
- 41.e. Mill Grinding will have potential emissions of particulate matter equal to or greater than one (1) ton per year. While LRAPA has not performed a formal TACT determination for

particulate matter from this emission unit, LRAPA has determined that the use of a baghouse control device likely meets TACT for this process.

Plant Site Emission Limits (PSELs)

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

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PTE (TPY)	SER (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)		
PM	25	25	25	24	22	21.7	24
PM ₁₀	21	21	21	24	22	21.1	14
PM _{2.5}	NA	13	13	22	22	21.1	9
CO	2	2	2	99	24	24.3	99
NO _x	9	9	9	39	25	24.0	39
SO ₂	14	14	14	39	1.1	1.1	39
VOC	10	10	10	249	249	249	39
GHG	4,376	4,376	4,376	76,933	76,933	76,933	74,000

- 42.a. The facility baseline emission rates for PM, PM₁₀, SO₂, NO_x, CO, and VOC were established in the ACDP issued on 01/26/1996. The VOC baseline emission rate was revised in the ACDPs issued on 01/26/2001 and 04/07/2015 based upon more accurate and reliable emission factors for kiln drying under the authority of LRAPA 42-0048(6)(c). The baseline emission rate for PM₁₀ was most recently revised under the ACDP issued on 09/30/2022 as allowed under LRAPA 42-0048(6)(c) because the DEQ emission factors for PM₁₀ from sawmill operations have been changed as reflected in the 10/10/2017 General ACDP for sawmill, planing mill, millwork, plywood manufacturing and veneer drying. A baseline emission rate is not established for PM_{2.5} in accordance with LRAPA 42-0048(3). While DEQ changed the HAP and VOC emission factors for dry kilns in 2021, there is not enough historical information available to reset the VOC baseline emission rate.
- 42.b. The baseline emission rate for GHGs was established under the ACDP issued on 09/20/2022. For GHGs, the baseline emission rate is any consecutive 12 calendar month period during calendar years 2000 through 2010. The facility used the calendar year 2007 to establish their GHG baseline emission rate.
- 42.c. The netting basis for PM, SO₂, NO_x, CO, VOC, and GHGs are the same as the baseline emission rates. The original netting basis for PM_{2.5} was based on a ratio of the PM_{2.5} PSEL to the PM₁₀ PSEL (0.59) multiplied by the PM₁₀ netting basis as established in the ACDP issued on 04/07/2015. The PM_{2.5} netting basis was revised under the ACDP issued on 09/20/2022. The revised netting basis for PM_{2.5} is based on the DEQ emission factors from the 10/10/2017 General ACDP for sawmill, planing mill, millwork, plywood manufacturing and veneer drying.
- 42.d. The PSELs for this facility were previously established under the Standard ACDP issued on 09/20/2022. Under the regulations allowed at that time, PSEL were established one of two ways: (1) For sources with a PTE less than the SER that request a source specific PSEL, the source specific PSEL was set equal to the generic PSEL level, or (2) For sources with PTE greater than or equal to the SER, the source specific PSEL was set equal to the source's PTE, netting basis or a level requested by the applicant, whichever was less, except as allowed by rule. The PSEL for PM, NO_x and SO₂ were previously set at the generic PSEL level. Under the rules adopted by LRAPA on April 11, 2024, sources subject to a Standard ACDP or LRAPA Title V Operating permit will have their PSEL set equal to the source's PTE, netting basis or a level requested by the applicant, whichever is less, except as allowed by rule.

Significant Emission Rate

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

Pollutant	Proposed PSEL (TPY)	PSEL Increase Over Netting Basis (TPY)	PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY)	PSEL Increase Due to Modification (TPY)	SER (TPY)
PM	22	0	0	0	25
PM ₁₀	22	1	0	0	15
PM _{2.5}	22	9	0	0	10
CO	24	22	0	0	100
NO _x	25	16	0	0	40
SO ₂	1.1	0	0	0	40
VOC	249	239	0	0	40
GHGs	76,933	72,557	0	0	75,000

Unassigned Emissions and Emission Reduction Credits

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

Pollutant	Proposed Netting Basis (TPY)	PTE (TPY)	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	25	22	3	0	25
PM ₁₀	21	22	0	0	15
PM _{2.5}	13	22	0	0	10
CO	2	24	0	0	100
NO _x	9	25	0	0	40
SO ₂	14	1.1	13	0	40
VOC	10	249	0	0	40
GHGs	4,376	76,933	0	0	75,000

New Source Review (NSR)

45. For pollutants other than CO and PM₁₀, the proposed PSELs are less than the Major NSR threshold of 250 TPY per regulated pollutant for a non-listed source. For CO and PM₁₀, the source is located in a maintenance area. The proposed PSELs for CO and PM₁₀ are less than the Major NSR threshold of 100 TPY. GHGs do not determine federal major source applicability.

Short Term NAAQS Compliance

46. Because the proposed modification is considered a Type 3 change under title 34, the permittee is required to demonstrate that the modification will not cause or contribute to a new exceedance of a NAAQS adopted under title 50. For the purposes of this project, LRAPA has asked the facility to review compliance with the short term 1-hour and 24-hour NAAQS for NO_x, SO₂ and PM_{2.5}. The facility first compared the emissions from the proposed modification to Oregon's Significant Emission Thresholds (SET) for each short term NAAQS pollutant. For this project, only the emissions of PM_{2.5} exceed the SET and require air quality modeling.
47. Air quality modeling demonstrated that the proposed modification would be in compliance with the 24-hour NAAQS for PM_{2.5} as shown in the following table. The air quality modeling indicates that the receptor with the highest impact is occurring on property related to Seneca Sustainable Energy.

The highest impact is resulting from (in order) AIA-1 (Plasma Table with Torch), K5-K12 (Eight (8) Stud Dry Kilns) and MG (Mill Grinding), with all other new or modified sources contributions being negligible. Because the modification results in predicted concentrations of 91% of the standard, LRAPA has included PM_{2.5} emission limitations and associated monitoring and recordkeeping for all emission units included in the air quality modeling. LRAPA has not required any compliance testing because the emission units that contribute the significant fraction of PM_{2.5} to the receptor with the highest impact are either uncontrolled and adequately quantified with the existing emission factors or controlled and assuming extremely conservative operating assumptions.

Pollutant	Project + Competing Sources (µg/m ³)	Background (µg/m ³)	Secondary Formation (µg/m ³)	Total (µg/m ³)	Standard (µg/m ³)
PM _{2.5} – 24 hour	8.7	23.3	1.5E-04	32.0	35

Federal Hazardous Air Pollutants/Toxic Air Contaminants

48. SSC is considered a major source of FHAPs because the potential emissions of at least one (1) individual FHAP exceed ten (10) TPY and the emissions of the aggregate of all FHAPs exceed 25 TPY from SSC and SSE combined.
49. The Standard ACDP contains a requirement that limits the maximum temperature in each dry kiln to no more than 200 degrees Fahrenheit (dry bulb) as monitored and recorded on a three (3) hour block average. This condition is part of defining the potential emissions of FHAP and CAO TACs from the facility.
50. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. Clean Air Oregon requires reporting on the emissions of approximately 600 TACs and regulates approximately 260 TACs that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 TACs. SSC was notified by LRAPA on January 2, 2024, to perform a risk assessment of their TAC emissions. LRAPA approved SSC's Risk Assessment report on April 12, 2024. SSC conducted a Level 3 Risk Assessment to determine cancer and noncancer risk from TAC emissions. As part of the risk assessment, the facility elected to adjust the acute non-cancer risk by target organ. Based on the results of the Level 3 Risk Assessment summarized below, SSC exceeds the Source Permit Level for Acute Risk and is required to have source risk limits. The primary Acute Risk driver is manganese emissions from Emission Unit MCUT. The proposed permit will contain process limitations on certain emission units based on the conditions assumed in SSC's Risk Assessment.

Facility Risk from Toxic Air Contaminants

Risk Type	Exposure	Calculated Risk	Rounded Risk	Source Permit Level	Community Engagement Level
Chronic Cancer Risk					
	Residential	5.090	5	5	25
	Child	0.016			
	Worker	0.270			
Chronic Non-Cancer Risk					
	Residential	0.199	0.2	0.5	1
	Child	0.003			
	Worker	0.076			
Acute Risk		0.91	1	0.5	1

* Risk values rounded in accordance with OAR 340-245-0200(4)(a) for comparison to the Risk Action Levels or Source Risk Limits.

Acute Risk Adjusted by Target Organ

Risk Type	Target Organ	Calculated Risk	Rounded Risk	Source Permit Level	Community Engagement Level
Acute Risk					
	Nervous System	0.87	1	0.5	1
	Respiratory System	0.08	0.1	0.5	1

51. The table below represents the potential emissions of FHAP/CAO TAC from SSC, excluding potential emissions from Categorically Insignificant Activities.

CAS/DEQ Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
Organics				
75-07-0	Acetaldehyde	30.5	Yes	Yes
107-02-8	Acrolein	0.49	Yes	Yes
71-43-2	Benzene	2.3E-02	Yes	Yes
50-32-8	Benzo[a]pyrene	7.7E-07	Yes	Yes
110-82-7	Cyclohexane	1.6E-02	No	Yes
100-41-4	Ethyl Benzene	9.4E-03	Yes	Yes
50-00-0	Formaldehyde	0.68	Yes	Yes
110-54-3	Hexane	8.0E-02	Yes	Yes
78-79-5	Isoprene	9.5E-04	No	Yes
98-82-8	Isopropylbenzene (Cumene)	1.5E-04	Yes	Yes
67-56-1	Methanol	29.6	Yes	Yes
91-57-6	2-Methyl Naphthalene	6.5E-06	Yes	Yes
91-20-3	Naphthalene	2.1E-04	Yes	Yes
401	PAHs	6.4E-05	Yes	Yes
123-38-6	Propionaldehyde	0.32	Yes	Yes
108-88-3	Toluene	0.06	Yes	Yes
526-73-8	1,2,3-Trimethylbenzene	2.5E-04	Yes	Yes
95-63-6	1,2,4-Trimethylbenzene	1.4E-03	Yes	Yes
108-67-8	1,3,5-Trimethylbenzene	5.5E-04	Yes	Yes
540-84-1	2,2,4-Trimethylpentane	5.5E-02	Yes	Yes
1330-20-7	Xylenes	3.1E-02	Yes	Yes
Inorganic Gases				
7664-41-7	Ammonia	2.05	No	Yes
Metals				
7429-90-5	Aluminum and Compounds	2.5E-03	No	Yes
7440-36-0	Antimony	8.6E-06	Yes	Yes
1309-64-4	Antimony Trioxide	3.1E-04	No	Yes
7440-38-2	Arsenic and compounds	7.3E-03	Yes	Yes
7440-39-3	Barium and compounds	1.8E-02	No	Yes
7440-41-7	Beryllium and compounds	2.0E-04	Yes	Yes
7440-43-9	Cadmium and compounds	7.1E-04	Yes	Yes
7440-47-3	Chromium VI, chromate/dichromate	1.0E-03	Yes	Yes
7440-48-4	Cobalt and compounds	5.0E-03	Yes	Yes
7440-50-8	Copper and compounds	3.5E-03	No	Yes
239	Fluorides	8.2E-03	No	Yes
7439-92-1	Lead and compounds	3.3E-04	Yes	Yes
7439-96-5	Manganese and compounds	1.7E-02	Yes	Yes

CAS/DEQ Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
7439-97-6	Mercury and compounds	1.7E-04	Yes	Yes
1313-27-5	Molybdenum trioxide	2.0E-03	No	Yes
7440-02-0	Nickel compounds, insoluble	3.0E-03	Yes	Yes
7723-14-0	Phosphorus	1.4E-04	Yes	Yes
7782-49-2	Selenium and compounds	1.6E-05	Yes	Yes
7631-86-9	Silica, crystalline (respirable)	6.3E-04	No	Yes
7440-62-2	Vanadium (fume or dust)	1.5E-03	No	Yes
7440-66-6	Zinc and compounds	1.9E-02	No	Yes
Total (TPY) =		64.0	61.9	64.0

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

40 CFR part 63 subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

52. SSC is a major source of FHAPs. As such, the eight (8) existing and the final proposed 12 dry kilns are subject to the requirements under 40 CFR part 63 subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. Although this facility does not manufacture plywood or composite wood products, the definition of “plywood and composite wood products manufacturing facility” includes lumber kilns located at any facility. Because the facility is an affected source that was constructed prior to January 9, 2003, and has not been reconstructed as defined in 40 CFR 63.2 since that time, the affected source is considered to be existing under this regulation. Under 40 CFR 63.2233(c), the facility was required to be in compliance with this regulation upon initial startup of the affected source as a major source as of the issuance of the Standard ACDP dated 09/30/2022.

40 CFR part 63 subpart DDDD Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.2230	Purpose	Yes	None.	NA
63.2231	Applicability	Yes	None.	NA
63.2232	Affected sources	Yes	None.	NA
63.2233	Compliance dates	Yes	None.	NA
63.2240	Compliance options and operating requirements	No	None.	NA
63.2241	Work practice requirements	No	None.	NA
63.2250	General requirements	No	None.	NA
63.2251	Requirements for the routine control device maintenance exemption	No	None.	NA
63.2252	Requirements for process units that have no control or work practice requirements	Yes	Lumber kilns are only subject to initial notification under 40 CFR 63.9(b). No further requirements apply. The ACDP application fulfilled the initial notification requirement as allowed under 40 CFR 63.9(b)(2).	24, 25
63.2260	Initial compliance with the compliance options, operating requirements, and work	No	None.	NA

40 CFR part 63 subpart DDDD Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
	practice requirements			
63.2261	Performance tests or other initial compliance demonstrations	No	None.	NA
63.2262	Conducting performance tests and establishing operating requirements	No	None.	NA
63.2263	Initial compliance for a dry rotary dryer	No	None.	NA
63.2264	Initial compliance for a hardwood veneer dryer	No	None.	NA
63.2265	Initial compliance for a softwood veneer dryer	No	None.	NA
63.2266	Initial compliance for a veneer dryer	No	None.	NA
63.2267	Initial compliance for a reconstituted wood product press or board cooler	No	None.	NA
63.2268	Initial compliance for a wet control device	No	None.	NA
63.2269	Monitoring installation, operation, and maintenance requirements	No	None.	NA
63.2270	Continuous compliance monitoring and data collection	No	None.	NA
63.2271	Continuous compliance with the compliance options, operating requirements, and work practice requirements	No	None.	NA
63.2280	Notifications	No	None.	NA
63.2281	Reports	No	None.	NA
63.2282	Records	No	None.	NA
63.2283	Form and retention of records	No	None.	NA
63.2290	General Provision applicability	No	None.	NA
63.2291	Implementation and enforcement	No	None.	NA
63.2292	Definitions	Yes	None.	NA

40 CFR part 63 subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

53. SSC is a major source of FHAPs. As such, Boiler-3, Boiler-4 and Boiler-5 are subject to the requirements under 40 CFR part 63 subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. Boiler-3 is considered an existing boiler under 40 CFR 63.7490(b) because although the boiler was installed after June 4, 2010, the facility was an area source at the time of installation. Boiler-4 and Boiler-5 will be considered new boilers. Under 40 CFR 63.7495(c)(2), Boiler-3 must be in compliance with this regulation within three (3) years after the facility becomes a major source of FHAP. Boiler-4 and Boiler-5 must be in compliance with this regulation upon startup.

54. The 40 CFR part 63 subpart DDDDD requirements that are applicable to Boiler-3, Boiler-4 and Boiler-5 at the facility are identified in the following table:

40 CFR part 63 subpart DDDDD Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.7480	Purpose	Yes	None.	NA
63.7485	Applicability	Yes	None.	NA
63.7490	Affected source	Yes	Boiler-3 is existing. Boiler-4 and Boiler-5 are new.	NA
63.7491	Exceptions to affected source	No	None.	NA
63.7495	Compliance dates	Yes	Boiler-3 has three years to comply. Boiler-4 and Boiler-5 must comply upon startup.	29
63.7499	Subcategories	Yes	Boilers are designed to burn gas 1 fuels.	NA
63.7500	Emission limitations, work practice standards, and operating limits	Yes	Conduct a tune-up annually or every five (5) years, one-time energy assessment	30
63.7505	General requirements	Yes	None.	31
63.7510	Initial compliance requirements	No	None.	32
63.7515	Subsequent performance tests, fuel analyses, or tune-ups	Yes	Conduct a tune-up annually or once every five (5) years	33
63.7520	Stack tests and procedures	No	None.	NA
63.7521	Fuel analyses, fuel specifications, and procedures	No	None.	NA
63.7522	Emissions averaging	No	None.	NA
63.7525	Monitoring, installation, operation, and maintenance requirements	No	None.	NA
63.7530	Initial compliance with emission limitations, fuel specifications and work practice standards	Yes	None.	34
63.7533	Efficiency credits	No	None.	NA
63.7535	Minimum monitoring data	No	None.	NA
63.7540	Continuous compliance with emission limitations, fuel specifications and work practice standards	Yes	None.	35
63.7541	Continuous compliance with emission averaging	No	None.	NA
63.7545	Notifications	Yes	None.	36
63.7550	Reports	Yes	None.	37
63.7555	Records	Yes	None.	38
63.7560	Form and retention of records	Yes	None.	39
63.7565	General Provision applicability	Yes	None.	NA
63.7570	Implementation and enforcement	Yes	None.	NA
63.7575	Definitions	Yes	None.	NA

National Emission Standards of Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities – 40 CFR part 63 Subpart CCCCCC

55. SSC is a major source of FHAPs. The facility has one (1) gasoline dispensing facility. Because the facility is a major source of FHAPs, the area source requirements under 40 CFR part 63 subpart CCCCCC – National Emission Standards of Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities do not apply. There is no major source NESHAP for gasoline dispensing facilities.

40 CFR part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

56. The facility is a major source of FHAPs. The diesel-fired 150 kW emergency generator CIA-1 was installed on or after June 12, 2006 and is considered a new stationary RICE subject to the requirements under 40 CFR part 63 subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Under 40 CFR 63.6590(c)(6), a new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of FHAP emissions must meet the requirements of 40 CFR 63 subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for these engines under 40 CFR part 63 subpart ZZZZ
57. The 40 CFR part 63 subpart ZZZZ requirements that are applicable to CIA-1 are identified in the following table:

40 CFR part 63, subpart ZZZZ Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.6580	Purpose	Yes	None.	NA
63.6585	Applicability	Yes	None.	NA
63.6590	Applicability	Yes	Subject to limited requirements.	58
63.6600	Emission limitations	No	None.	NA
63.6601	Emission limitations	No	None.	NA
63.6602	Emission limitations	No	None.	NA
63.6603	Emission limitations	No	None.	NA
63.6604	Fuel requirements	No	None.	NA
63.6605	General requirements	No	None.	NA
63.6610	Initial compliance	No	None.	NA
63.6611	Initial performance test	No	None.	NA
63.6612	Initial performance test	No	None.	NA
63.6615	Subsequent performance tests	No	None.	NA
63.6620	Performance test procedures	No	None.	NA
63.6625	Monitoring and maintenance requirements	No	None.	NA
63.6630	Initial compliance	No	None.	NA
63.6635	Continuous compliance	No	None.	NA
63.6640	Continuous compliance	No	None.	NA
63.6645	Notifications	No	None.	NA
63.6650	Reports	No	None.	NA
63.6655	Records	No	None.	NA
63.6660	Record retention	No	None.	NA

40 CFR part 63, subpart ZZZZ Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.6665	General provisions	No	None.	NA
63.6670	Implementation and enforcement	No	None.	NA
63.6675	Definitions	No	None.	NA

New Source Performance Standards (NSPSs)

40 CFR part 60 subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

58. Any steam generating unit as this term is defined under 40 CFR 60.41c that commences construction, modification, or reconstruction after June 9, 1989, and that has a maximum design heat input capacity of greater than or equal to 2.9 MW (10 MMBtu per hour) and no more than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) is subject to regulation under 40 CFR part 60 subpart Dc. Boiler B-3, Boiler-4, and Boiler-5 were or will be constructed after the applicability date and have a maximum heat input capacity of 50 MMBtu per hour each. Each boiler is or will be subject to this regulation.
59. The 40 CFR part 60 subpart Dc requirements that are applicable to Boiler-3, Boiler-4 and Boiler-5 are identified in the following table:

40 CFR part 60 subpart Db Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.40c	Applicability and delegation of authority	Yes	Each boiler has a maximum heat input capacity between 10 and 100 MMBtu per hour.	NA
60.41c	Definitions	Yes	Each boiler meets the definition of a <i>steam generating unit</i> .	NA
60.42c	Standards for sulfur dioxide (SO ₂)	No	None.	NA
60.43c	Standard for particulate matter (PM)	No	None.	NA
60.44c	Compliance and performance test methods and procedures for sulfur dioxide	No	None.	NA
60.45c	Compliance and performance test methods and procedures for particulate matter	No	None.	NA
60.46c	Emission monitoring for sulfur dioxide	No	None.	NA
60.47c	Emission monitoring for particulate matter	No	None.	NA
60.48c	Reporting and recordkeeping	Yes	Maintain records of the monthly usage of natural gas by each	28

40 CFR part 60 subpart Db Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
	requirements		boiler.	

40 CFR part 60 subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

60. For facilities, 40 CFR part 60 subpart IIII applies to any stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines. Diesel-fired 150 kW emergency generator CIA-1 meets the definition of an *emergency stationary internal combustion engine* under 40 CFR 60.4219 and was installed in 2016. Facilities that have a 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new nonroad CI engines as listed in 40 CFR 89.112 and 40 CFR 89.113.
61. Facilities with a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. Currently, the sulfur content of nonroad diesel fuel may not exceed 15 ppm (0.0015 percent by weight).
62. Emergency stationary ICE may be operated for maintenance checks and readiness testing for a maximum of 100 hours per calendar year. The federal requirements also allow an emergency stationary ICE to operate for up to 50 hours per year in non-emergency situations, for which the 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing. However, the description of an emergency generator in the definition of “Categorically Insignificant Activity” LRAPA title 12, does not allow an emergency generator to be used in this manner in the state of Oregon. The portions of the rule that conflict with the definition in LRAPA title 12 have not been included in the draft permit. There is no time limit on the use of emergency stationary ICE in emergency situations.
63. The 40 CFR part 60 subpart IIII requirements that are applicable to the diesel-fired emergency generator CIA-1 are identified in the following table:

40 CFR part 60 subpart IIII Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
60.4200	Applicability	Yes	None.	NA
60.4201	Emission standards	No	None.	NA
60.4202	Applicability	Yes	2007 model year and later emergency stationary CI ICE with a max engine power less than or equal to 3,000 HP and a displacement of less than ten (10) liters per cylinder are subject to the emission standards in 40 CFR 89.112 and 40 CFR 89.113.	NA
60.4203	Emission standards	No	None.	NA
60.4204	Emission standards	No	None.	NA
60.4205	Emission standards	Yes	Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters	59

40 CFR part 60 subpart III Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
			per cylinder must comply with the emission standards in 40 CFR 89.112 and 40 CFR 89.113.	
60.4206	Emission standards	Yes	The emission standards are applicable for the life of the engine.	61
60.4207	Fuel requirements	Yes	Must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	62
60.4208	Requirements	No	None.	NA
60.4209	Monitoring requirements	Yes	Installation of a non-resettable hour meter.	63
60.4210	Compliance requirements	No	None.	NA
60.4211	Compliance requirements	Yes	None.	64
60.4212	Testing requirements	No	None.	NA
60.4213	Testing Methods	No	None.	NA
60.4214	Notification, reporting, and recordkeeping requirements	Yes	None.	65
60.4215	Special requirements.	No	None.	NA
60.4216	Special requirements	No	None.	NA
60.4217	Special requirements	No	None.	NA
60.4218	General provisions	Yes	None.	NA
60.4219	Definitions	Yes	None.	NA

Toxic Release Inventory

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

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

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

In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. This facility has not reported any emissions to the TRI program because they do not manufacture, process, or otherwise use chemicals in excess of the applicable reporting thresholds.

Compliance History

65. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The

following table indicates the inspection history of this facility since 1979:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	09/05/1979	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	06/06/1980	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	11/25/1981	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	11/12/1982	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/01/1984	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	11/1984	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/03/1986	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	10/21/1986	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	01/06/1988	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	12/12/1988	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	12/19/1989	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	12/10/1990	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	04/27/1992	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	04/13/1993	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	07/26/1994	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/21/1997	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/25/1998	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	01/28/1999	Not in compliance – NON 1709
LRAPA - Full Compliance Evaluation	02/11/2000	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/06/2001	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	09/09/2003	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/08/2006	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	08/23/2007	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	04/19/2011	Not in compliance – NON 3287
LRAPA - Full Compliance Evaluation	04/18/2014	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	07/18/2019	No evidence of non-compliance
LRAPA - Full Compliance Evaluation	02/23/2024	No evidence of non-compliance

66. LRAPA has issued the following violation notices and/or taken the following enforcement actions against this facility:
- 66.a. On October 17, 1994, LRAPA issued Stipulated Final Order (SFO) No. 94-65 to the facility ordering them to apply for a construction approval and permit modification. The facility fulfilled the order and the SFO was closed.
 - 66.b. On January 30, 1996, LRAPA issued NON No. 1184 to the facility for installing process and pollution control equipment without receiving an authority to construct. The facility was required to not operate the equipment until a permit modification was issued and the violation was closed.
 - 66.c. On February 5, 1999, LRAPA issued NON No. 1709 to the facility for exceeding the dry kiln throughput limits. The facility was required to calculate VOC emissions for wood processed through the dry kilns for a rolling 12-month period to include August and September of 1997 and submit the findings to LRAPA. The amount of VOCs emitted was not enough to trigger major source thresholds and the violation was closed.
 - 66.d. On February 17, 2006, LRAPA issued NON No. 2855 to the facility for failure to submit report of distillate fuel oil used for the first quarter of 2004. The report was required to have been received by LRAPA on April 30, 2004. Facility submitted report and violation was closed.
 - 66.e. On April 19, 2011, LRAPA issued NON No. 3287 to the facility for failure to submit the renewal application in a timely manner. The facility submitted the renewal application and the violation was closed.
 - 66.f. On November 15, 2012, LRAPA and the facility entered into Stipulation and Final Order (SFO) No. 12-3404 to address permit violations related to the facility drying in excess of the

rate identified in Condition 14.f. of the permit in effect at the time (90,886 MBF of lumber) during the 12-month rolling period ending April 30, 2012 and each subsequent 12-month rolling period. As part of the resolution stipulated in the SFO, the permit was revised to clarify the FHAP limits and the facility was required to pay a civil penalty assessed in the amount of \$2,400. The permit was revised by way of Addendum 1 (Non-PSD/NSR Simple Technical Modification) on December 3, 2012. The facility paid the civil penalty in the amount of \$2,400 and the file was closed.

Performance Test Results

67. The facility is not required to conduct performance testing at this time as the basis for the facility's emission estimates, industry-specific emission factors, appears to be reasonable. LRAPA is not aware of any performance testing conducted at this facility.

Recordkeeping Requirements

68. The facility is required to keep and maintain a record of the following information for a period of five (5) years:

Activity	Units	Minimum Recording Frequency
PSEL Recordkeeping		
Stud mill production	MBF	Monthly
Mill A lumber production	MBF	Monthly
Dry Kiln Throughput by species	MBF	Monthly
Chips shipped from plant site, including to SSE	BDT	Monthly
Sawdust shipped from plant site, including to SSE	BDT	Monthly
Shavings shipped from plant site, including to SSE	BDT	Monthly
Natural gas combusted	MMSCF	Monthly
General Recordkeeping		
Fugitive emissions survey	NA	Monthly
Visible emissions survey	NA	Monthly
Pressure drop monitoring on baghouses	Inches of water column	Weekly
O&M Plan	NA	Maintain the current version on-site
Dry kiln temperature	Degrees F	Each three (3) hour block average
Corrective action taken if dry kiln temperature exceeds 200°F	NA	Each occurrence
NSPS subpart Dc Recordkeeping		
Initial notification for NSPS Dc	NA	One time
Natural gas combusted	MMSCF	Monthly
NESHAP subpart DDDDD (5D) Recordkeeping		
Initial notification for NESHAP 5D	NA	One time
Notice of compliance status	NA	One time
Energy assessment	NA	One time
Five (5) year tune-up	NA	Every five (5) years
NESHAP subpart DDDD (4D) Recordkeeping		
Initial notification for NESHAP 5D	NA	One time
NSPS subpart IIII Recordkeeping		
The date and time of operation in hours of CIA-1	Date, Hours of operation	Each occurrence
Reason for operation of CIA-1	NA	Each occurrence
The total hours that CIA-1 operates for emergency reasons in a calendar year	Hours	Monthly
The total hours that CIA-1 operates for non-emergency	Hours	Monthly

Activity	Units	Minimum Recording Frequency
reasons in a calendar year		
Documentation that the engine is certified by the manufacturer	NA	Maintain documentation
LRAPA Title 44 Recordkeeping		
Initial notification for Title 44	NA	One time
Records related to the O&M of all equipment in gasoline service	NA	Each occurrence
Records of total throughput volume of gasoline for each calendar month	Gallons	Monthly
The annual gasoline throughput of the GDF for the previous calendar year	Gallons	Monthly
A summary of changes made at the GDF on any equipment in gasoline or vapor service which may affect emissions	NA	Each occurrence
Records of the occurrence and duration of each malfunction of operation	NA	Each occurrence
Records of actions taken during periods of malfunction to minimize emissions	NA	Each occurrence
Documentation of the distance the submerged fill pipe extends from the bottom of each storage tank	NA	Maintain documentation
A copy of the written plan for cleanup of spills.	NA	Maintain the current version on-site
Cleaner Air Oregon Recordkeeping		
AIA-1: Daily hours cutting metal	Hours	Daily
AIA-1: Hours cutting metal in any 12-consecutive month period	Hours	Monthly
AIA-1: Documentation that only mild steel is cut	NA	Maintain documentation
AIA-1: Documentation that the process is equipped with a water bath	NA	Maintain documentation
AIA-2: The number of gallons of coating used in any day	Gallons	Daily
AIA-2: The number of gallons of coating used in any 12-consecutive month period	Gallons	Monthly
AIA-2: The manufacture's name of each coating applied in the paint booth	NA	Maintain documentation
AIA-2: A safety data sheet or other documentation from the manufacturer that lists the constituents of each coating applied in the paint booth	NA	Maintain documentation
AIA-2: Spray booth filter particulate matter control efficiency	%	Maintain documentation
AIA-3: The number of pounds of welding wire/rod used in any day	Pounds	Daily
AIA-3: The number of pounds of welding wire/rod used in any 12-consecutive month period	Pounds	Monthly
AIA-3: Documentation that only FCAW E71T electrodes are used for welding	NA	Maintain documentation

Reporting Requirements

69. The facility must submit to LRAPA the following reports by the dates indicated in the table below:

Report	Reporting Period	Due Date
A Title 44 Report that includes the applicable information under OAR 340-244-0251(2).	Annual	February 15
A summary of maintenance and repairs performed on any pollution control devices at the facility.	Semiannual	March 1, September 1
A summary of all complaints received by the permittee and their resolution as required by Condition G11 of the permit.	Semiannual	March 1, September 1
The excess emissions log required by Condition G16 of the permit, if any planned or unplanned excess emissions have occurred during the reporting period.	Semiannual	March 1, September 1
PSEL pollutant emissions as calculated according to Condition 5 of the permit including supporting calculations.	Semiannual	March 1, September 1
Cleaner Air Oregon Change in Zoning Report	Annual	March 1
Reports required under 40 CFR part 63 subpart 5D.	Annual or every 5 years	March 1
GHG Report, if required by Condition 7 of the permit.	Annual	March 31

70. The facility is required to submit an annual report to LRAPA by March 1st of each year this permit is in effect. The annual compliance report must include emissions calculations, recordkeeping requirements, and any entries in the upset log as required by Condition G15 of the permit.

Public Notice

71. Pursuant to LRAPA subparagraph 37-0066(4)(b)(B), issuance of a modified Standard Air Contaminant Discharge Permit for a moderate or complex technical modification for which there will be no increase in allowed emissions requires a Category II public notice in accordance with LRAPA paragraph 31-0030(3)(b). A Category II public notice requires LRAPA to provide notice of the proposed permit action and a minimum of 30 days for interested persons to submit written comments. This permit will be on public notice from April 17, 2024 to June 4, 2024. Comments may be submitted in writing during the comment period. LRAPA will hold a public hearing on May 21, 2024. After the comment period and public hearing, LRAPA will review the comments and modify the permit as may be appropriate.

JJW/CW
 04/16/2024

Note:			
The total HAPs only includes emissions from Seneca Sawmill Company			

Seneca Sawmill Company - 207459								
Emission Detail Sheets								
Table 4 - Boiler-3 Potential Emission Calculations								
Boiler Specifications								
Max Heat Input	50	MMBtu/hr						
Heat Value - Natural Gas	1026	MMBtu/MMCF						
Max Hrs Operation	8760	hr/yr						
Criteria Pollutants								
		NG Emission Factor	NG Emission	Potential	Potential	Potential	NG Emission	NG Emission
		Factor	Factor	Hourly	Daily	Annual	Factor	Factor
ID	Pollutant	(lb/MMCF)	Units	Emissions	Emissions	Emissions	Conversion	Factor
				(lbs/hr)	(lbs/day)	(TPY)		Units
PM25	PM/PM ₁₀ /PM _{2.5}	2.5	lbs/MMCF	0.12	2.92	0.53		
CO	Carbon Monoxide	0.037	lbs/MMBtu	1.85	44.40	8.10	38	lbs/MMCF
NOX	Nitrogen Oxides	0.036	lbs/MMBtu	1.80	43.20	7.88	37	lbs/MMCF
SO2	Sulfur Dioxide	1.7	lbs/MMCF	0.08	1.99	0.36		
VOC	VOCs	5.5	lbs/MMCF	0.27	6.43	1.17		
	GHGs (CO ₂ equiv.)	117	lbs/MMBtu	5,855	140,518	25,644		
HAP Emissions								
		NG Emission Factor		Potential	Potential	Potential		
		Factor		Hourly	Daily	Annual		
		(lb/MMCF)	Units	Emissions	Emissions	Emissions	Federal	CAO
CAS	Pollutant			(lbs/hr)	(lbs/day)	(TPY)	HAP	Air Toxic
Organics								
75-07-0	Acetaldehyde	0.0031	lb/MMcf	1.5E-04	3.6E-03	6.6E-04	Yes	Yes
107-02-8	Acrolein	0.0027	lb/MMcf	1.3E-04	3.2E-03	5.8E-04	Yes	Yes
71-43-2	Benzene	0.0058	lb/MMcf	2.8E-04	6.8E-03	1.2E-03	Yes	Yes
50-32-8	Benzo[a]pyrene	0.0000012	lb/MMcf	5.8E-08	1.4E-06	2.6E-07	Yes	Yes
100-41-4	Ethyl Benzene	0.0069	lb/MMcf	3.4E-04	8.1E-03	1.5E-03	Yes	Yes
50-00-0	Formaldehyde	0.0123	lb/MMcf	6.0E-04	1.4E-02	2.6E-03	Yes	Yes
110-54-3	Hexane	0.0046	lb/MMcf	2.2E-04	5.4E-03	9.8E-04	Yes	Yes
91-20-3	Naphthalene	0.0003	lb/MMcf	1.5E-05	3.5E-04	6.4E-05	Yes	Yes
401	PAHs	0.0001	lb/MMcf	4.9E-06	1.2E-04	2.1E-05	Yes	Yes
108-88-3	Toluene	0.0265	lb/MMcf	1.3E-03	3.1E-02	5.7E-03	Yes	Yes
1330-20-7	Xylenes	0.0197	lb/MMcf	9.6E-04	2.3E-02	4.2E-03	Yes	Yes
Inorganic Gases								
7664-41-7	Ammonia	3.2000	lb/MMcf	1.6E-01	3.7E+00	6.8E-01	No	Yes
Metals								
7440-38-2	Arsenic and compounds	0.0002	lb/MMcf	9.7E-06	2.3E-04	4.3E-05	Yes	Yes
7440-39-3	Barium and compounds	0.0044	lb/MMcf	2.1E-04	5.1E-03	9.4E-04	No	Yes
7440-41-7	Beryllium and compounds	0.000012	lb/MMcf	5.8E-07	1.4E-05	2.6E-06	Yes	Yes
7440-43-9	Cadmium and compounds	0.0011	lb/MMcf	5.4E-05	1.3E-03	2.3E-04	Yes	Yes
18540-29-9	Chromium VI, chromate/dichromate	0.0014	lb/MMcf	6.8E-05	1.6E-03	3.0E-04	Yes	Yes
7440-48-4	Cobalt and compounds	0.000084	lb/MMcf	4.1E-06	9.8E-05	1.8E-05	Yes	Yes
7440-50-8	Copper and compounds	0.00085	lb/MMcf	4.1E-05	9.9E-04	1.8E-04	No	Yes
7439-92-1	Lead and compounds	0.0005	lb/MMcf	2.4E-05	5.8E-04	1.1E-04	Yes	Yes
7439-96-5	Manganese and compounds	0.00038	lb/MMcf	1.9E-05	4.4E-04	8.1E-05	Yes	Yes
7439-97-6	Mercury and compounds	0.00026	lb/MMcf	1.3E-05	3.0E-04	5.5E-05	Yes	Yes
1313-27-5	Molybdenum trioxide	0.00165	lb/MMcf	8.0E-05	1.9E-03	3.5E-04	No	Yes
365	Nickel compounds, insoluble	0.0021	lb/MMcf	1.0E-04	2.5E-03	4.5E-04	Yes	Yes
7782-49-2	Selenium and compounds	0.000024	lb/MMcf	1.2E-06	2.8E-05	5.1E-06	Yes	Yes
7440-62-2	Vanadium (fume or dust)	0.0023	lb/MMcf	1.1E-04	2.7E-03	4.9E-04	No	Yes
7440-66-6	Zinc and compounds	0.029	lb/MMcf	1.4E-03	3.4E-02	6.2E-03	No	Yes
	Total =	3.33				0.71	0.02	0.71
GHG-Related Emission Factors								
	Pollutant	Natural Gas (kg/MMBtu)	GWP					
	Carbon Dioxide (CO ₂)	53.06	1					
	Methane (CH ₄)	1.0E-03	25					
	Nitrous Oxide (N ₂ O)	1.0E-04	298					
Notes:								
NOx and CO emission factors are based on manufacturer guarantees								
PM/PM ₁₀ /PM _{2.5} , SO ₂ , and VOC emissions factors are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011)								
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2								
Toxics emission factors are based on the Oregon DEQ 2020 ATEI Combustion EF Tool								

Notes:					
NOx and CO emission factors are based on manufacturer guarantees					
PM/PM ₁₀ /PM _{2.5} , SO ₂ , and VOC emissions factors are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011)					
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2					
Toxics emission factors are based on the Oregon DEQ 2020 ATE! Combustion EF Tool					

Notes:								
NOx and CO emission factors are based on manufacturer guarantees								
PM/PM ₁₀ /PM _{2.5} , SO ₂ , and VOC emissions factors are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011)								
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2								
Toxics emission factors are based on the Oregon DEQ 2020 ATEI Combustion EF Tool								

Seneca Sawmill Company - 207459						Future Configuration							
Emission Calculations						Dim Kilns	Capacity	Stud Kilns	Capacity				
Table 8 - Drying Kilns Emissions						DF	35	250.3	991,131 MBF DF/yr				
						Hemlock	60	146.0	578,160 MBF Hem/yr				
This table includes three separate emissions: (1) project emissions at maximum capacity for determination of the type of change, (2) requested maximum production criteria pollutant and HAP emissions at 540,000 MBF/yr, and (3) Cleaner Air Oregon TAC													
(1) Project Emissions at Max Capacity													
8 New Stud Kilns at Max Capacity (removed Burnt wood EFs)													
Max Capacity Kiln Product		660,754	MBF DF/yr		385,440	MBF Hem/yr						Max loading of all 12 kilns (bf/cycle) 3,960,000	
Max Drying Temp		200	°F										
Max Kiln VOC PTE		249	TPY										
Criteria Pollutants													
		100% Douglas Fir		100% Hemlock Fir									
		Green Emission Factor	Capacity Emissions	Green Emission Factor	Capacity Emissions	Kiln Max Capacity Emissions	Kiln PSEL Annual Emissions	Kiln Max Daily Emissions	Kiln Max Hourly Emissions	Significant Emission Rate			
Pollutant		(lb/MBF)	(TPY)	(lb/MBF)	(TPY)	(TPY)	(TPY)	(TPY)	(TPY)	(TPY)			
VOC		1.116	369	0.396	76.4	369	249	1.05	0.044	40			
PM25		PM/PM ₁₀ /PM _{2.5}	0.020	6.61	0.050	9.6	9.6	9.6	0.03	0.001	25 / 15 / 10		
(2) Requested Max Production Emissions													
		540,000	Hem MBF/yr	446,316.5	DF MBF/yr	Daily Max Production Equiv.							
		3,960	MBF/cycle			1584.0 Hem MBF/day							
		350	days/yr			2715.43 DF MBF/day							
		24	hrs/day										
Max Drying Temp		200	°F										
Max Kiln VOC PTI		249	TPY										
Criteria Pollutants													
		100% Douglas Fir		100% Hemlock Fir									
		Green Emission Factor	Burnt Emission Factor	Capacity Emissions	Green Emission Factor	Burnt Emission Factor	Capacity Emissions	Kiln Max Capacity Emissions	Kiln PSEL Annual Emissions	Kiln Max Daily Emissions			
Pollutant		(lb/MBF)	(lb/MBF)	(TPY)	(lb/MBF)	(lb/MBF)	(TPY)	(TPY)	(TPY)	(TPY)			
VOC		1.116	0.669	301	0.396	0.238	107.0	301	249	1721.52			
PM25		PM/PM ₁₀ /PM _{2.5}	0.020	0.020	5.40	0.050	0.050	13.5	13.5	13.5	77.14		
FHAPs													
		100% Douglas Fir		100% Hemlock Fir									
		Green Emission Factor	Burnt Emission Factor	Douglas Fir Capacity Emissions	Green Emission Factor	Burnt Emission Factor	Hemlock Capacity Emissions	Kiln Max Capacity Emissions	Requested Kiln Emissions	Federal HAP	CAO Air Toxic		
CAS		Pollutant	(lb/MBF)	(lb/MBF)	(TPY)	(lb/MBF)	(lb/MBF)	(TPY)	(TPY)	(TPY)	(TPY)		
75-07-0		Acetaldehyde	0.0430	0.0258	11.61	0.1128	0.0677	30.5	30.5	30.5	Yes	Yes	
107-02-8		Acrolein	0.0008	0.0005	0.22	0.0018	0.0011	0.49	0.49	0.49	Yes	Yes	
50-00-0		Formaldehyde	0.0025	0.0015	0.68	0.0021	0.0012	0.56	0.68	0.56	Yes	Yes	
67-56-1		Methanol	0.0754	0.0452	20.36	0.1097	0.0658	29.6	29.6	29.6	Yes	Yes	
123-38-6		Propionaldehyde	0.0009	0.0005	0.24	0.0012	0.0007	0.32	0.32	0.32	Yes	Yes	
		Total =	0.1226	0.0736		0.2276	0.1366						
Notes:													
VOC and HAP emission factors are from DEQ HAP and VOC Emission Factors for Lumber Drying, 2021, AQ-EF09 assuming a maximum kiln temperature of 200°F													
PM/PM ₁₀ /PM _{2.5} emission factors are from DEQ Emission Factors Wood Products, AQ-EF02 (08/01/2011)													
Burnt emission factors are based on the assumption in the application for NC-207459-A20 that burnt wood organic compound emissions are 60% of green wood													
(3) Kiln Cleaner Air Oregon Toxic Air Contaminant Emissions													
Requested Max of 540,000 MBF/yr													
		Douglas Fir Green Emission Factor	Hemlock Green Emission Factor	Annual Max of DF or Hemlock			Daily Max						
				Annual Emission	Requested Kiln Emissions	Per Kiln Annual Emissions	Short-term Emission Factor	Short-term Emissions	Per Kiln Daily Emissions				
CAS		Pollutant	(lb/MBF)	(lb/MBF)	(lb/MBF)	(TPY)	(TPY)	(lb/MBF)	(lb/day)	(lb/day)			
75-07-0		Acetaldehyde	0.0430	0.1128	0.1128	30.5	2.54	0.1128	178.7	14.9			
107-02-8		Acrolein	0.0008	0.0018	0.0018	0.5	0.04	0.0018	2.9	0.2			
50-00-0		Formaldehyde	0.0025	0.0021	0.0021	0.6	0.05	0.0025	6.8	0.6			
67-56-1		Methanol	0.0754	0.1097	0.1097	29.6	2.47	0.0754	204.7	17.1			
123-38-6		Propionaldehyde	0.0009	0.0012	0.0012	0.3	0.03	0.0009	2.4	0.2			

Table 9 - Sawmill/Planing Mill Activities and Baghouse Emissions

Notes:
PM/PM₁₀/PM_{2.5} emissions based on based on emission factors from Table 13.2 of the DEQ General ACDP for sawmills, planning mills, millwork, plywood manufacturing, and/or veneer drying (AQGP-010 expiring 10/01/2027)
* EP-13 control emissions from intermittent metal grinding - estimated at outlet concentration of 0.005 gr/dscf and 20 hrs/day
For the Rail Chip Bin Target Box the DEQ AQGP-010 emission factors are based on a medium efficiency cyclone loading sanderdust. At SSC, railcars receive wood chips with a significant portion of the air stream carrying finer particulate being filtered. As such, the DEQ AQGP-010 emissions factors for PM and PM₁₀ are reduced by a factor of 75% and PM_{2.5} emissions are assumed to be the same as PM₁₀ emissions.

Seneca Sawmill Company - 207459						
Emission Calculations						
Table 12 - Mill Grinding Baghouse TAC Emissions - AIA						
		Toxics Emission Unit ID: Mill Grinding				
		Emission Point(s): EP13		Mill Grinding Cyclone and Baghouse		
<div>General Description of Calculation Methodology:</div> <div>Estimated PM emissions based on mass of material emitted by well functioning baghouse. The primary material emitted from the grinding process is typically the grinding wheel itself which in turn is normally comprised of aluminum oxide. The toxic air contaminant and</div>						
Operating Parameters & Input Assumptions:						
<u>Total PM Emission Estimate</u>						
Airflow (cfm)		5600	ft3/min			
Baghouse exhaust loading		0.005	gr/dscf			
Mass Emitted (PM)		2102.4	lb/yr	175.2		
Operating Days		365	days/yr			
Operating Hours/Day for Annual EF		24	hr/day			
Mass Emitted		5.8	lb/day			
Max Daily Operation		24	hr/day			
Cr (VI) %		5%				
<u>Speciated TAC Emissions - Mill A Grinding basis</u>						
CAS or DEQ ID	TAC	Mass Fraction (mg/kg)	Emissions (lb/yr)	Emissions (lb/day)		lb/lb PM
7429-90-5	Aluminum and Compounds	3080	6.475	0.017741		0.0031
7440-36-0	Antimony and Compounds	8.17	0.017	0.000047		0.0000
7440-38-2	Arsenic and Compounds	14.3	0.030	0.000082		0.0000
7440-39-3	Barium and compounds	22.5	0.047	0.000130		0.0000
7440-41-7	Beryllium and Compounds	0.387	0.001	0.000002		0.0000
7440-43-9	Cadmium and Compounds	1.7	0.004	0.000010		0.0000
18540-29-9	Chromium VI, chromate and dichromate particulate	145.5	0.306	0.000838		0.0001
7440-48-4	Cobalt and Compounds	4710	9.902	0.027130		0.0047
7440-50-8	Copper and Compounds	232	0.488	0.001336		0.0002
7439-92-1	Lead and Compounds	4.71	0.010	0.000027		0.0000
7439-96-5	Manganese and Compounds	1880	3.953	0.010829		0.0019
7439-97-6	Mercury and Compounds	0.844	0.002	0.000005	at RL	0.0000
365	Nickel compounds, insoluble	1580	3.322	0.009101		0.0016
7782-49-2	Selenium and Compounds	1.05	0.002	0.000006	at RL	0.0000
7440-22-4	Silver and compounds	0.498	0.001	0.000003		0.0000
7440-28-0	Thallium and compounds	0.211	0.0004	0.000001	at RL	0.0000
504	Phosphorus and Compounds	132	0.278	0.000760		0.0001
7440-62-2	Vanadium (fume or dust)	134	0.282	0.000772		0.0001
7440-66-6	Zinc and Compounds	59.6	0.125	0.000343		0.0001
<u>Notes and References:</u>						
Refer to analytical report for Mill A Grinding.						
Chromium content is estimated to be 5% hexavalent chromium, based on EPA's NEI Augmentation Profile Factors for NAICS 332212 Hand and Edge Tool Manufacturing. This is appropriate because grinding steel at the sawmill is similar to metal grinding/sharpening in edge tool manufacturing.						
(https://gaftp.epa.gov/air/nei/2020/doc/supporting_data/Chromium_speciation_NAICS_28jan2023.zip) Additionally, EPA's NEI includes secondary steel foundries, which includes steel casting finishing and grinding operations, with the default hexavalant chromium content being						

Seneca Sawmill Company - 207459					
Emission Calculations					
Table 10 - Gasoline Dispensing Facility Annual VOC Emissions					
Vehicles Equipped with ORVR in Lane County =		65	percent		
GDF Activity - VOC Emissions (Submerged Fill Only)					
Tank Filling =	7.70	lbs/Mgals	Refueling - No ORVR =	10.36	lbs/Mgals
Breathing =	1.00	lbs/Mgals	Refueling - ORVR =	0.21	lbs/Mgals
Adjusted Refueling =	3.76	lbs/Mgals			
Spillage =	0.61	lbs/Mgals			
Hose Permeation =	0.062	lbs/Mgals			
Total =	13.13	lbs/Mgals			
	gal/mo	gal/yr			
Max GDF Throughput =	45,000	540,000			
	Potential Annual Emissions (TPY)				
Pollutant					
VOC	3.55				
Notes:					
ORVR = Onboard Refueling Vapor Recovery					
Tank filling emission factor from CARB "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (2013) - Table IV-I.					
Breathing emission factor from US EPA AP-42, Table 5.2-7.					
Refueling emission factor with no ORVR based on DEQ 2018 GDF VOC Estimates.					
Refueling emission factor with ORVR based on DEQ 2018 GDF VOC Estimates.					
Spillage emission factor from CARB "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (2013) - Table VI-I.					
Hose permeation emission factor from CARB "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (2013) - Table VII-I.					

Seneca Sawmill Company - 207459				
Emission Calculations				
Table 11 - Gasoline Dispensing Facility TAC Emissions				
Toxics Emission Unit ID: GDF				
Emission Points: GDF 1				
Description: Gasoline Dispensing Facility (6,000 gallon and 2,000 gallon tanks and dispensing area)				
General Description of Calculation Methodology:				
- Calculate daily VOC emissions based on TCEQ Guidance (Estimating Short Term Emission Rates from Fixed Roof Tanks, TCEQ - APDG 6250v3, revised 02/20) for filling the tank and EPA AP-42, Table 5.2-7 for vehicle filling losses (hose permeation, spillage and vapor displacement).				
- Calculate annual VOC emissions from tank filling, breathing and emptying calculated on GDF annual tab.				
- Calculate TAC emissions based on TAC Speciation for Gasoline (California Air Resources Board Speciation Profiles, highest weight fraction for each TAC from from Profile 691 ("Headspace vapors E10 summer gasoline fuel") and Profile 695 ("Headspace vapors E10 winter gasoline fuel")				
Operating Parameters & Input Assumptions:				
Max. Excluding Tank Fill	11.03 lbs/Mgals			
Daily Gasoline Vehicle Refilling Rate	1500 gal/day (estimate)			
Total Tank Capacity	8000 gallons			
Maximum Tank Filling Rate, FR _M	8000 gal/day			
Tank Contents	Motor gasoline RVP 13 (assumed worst case highest vapor pressure gasoline for AP-42 calculations)			
Vapor Molecular Weight, M _v	62 lb/lb-mole (AP-42 Table 7.1-2)			
Vapor Pressure Constant, A	11.644 dimensionless (AP-42 Table 7.1-2)			
Vapor Pressure Constant, B	5043.6 °R (AP-42 Table 7.1-2)			
Ideal Gas Constant, R	80.273 ((psia × gal)/(lbmol × °R)) (TCEQ)			
Worst Case Liquid Temperature, T _{LA}	554.67 °R (TCEQ, 95F)			
Daily VOC Emissions				
Calculate true vapor pressure based on AP-42, Chapter 7, Eqn. 1-25.	$P_{VM} = \exp \left[A - \left(\frac{B}{T_{LA}} \right) \right]$	(1-25)		
True Vapor Pressure, P _{VA}	12.82 psia	Equation 1		
Calculate daily VOC emission from filling tank based on TCEQ Equation 1	$L_{MAX} = \frac{M_v \times P_{VA}}{R \times T} \times FR_M$			
Maximum Daily Tank Emission Rate, L _{MAX}	142.8 lb/day			
Calculate daily VOC emissions from vehicle refueling based on AP-42, Table 5.2-7				
Maximum Daily Veh. Refuel Emission Rate, F _M	16.5 lb/day			
Total Max. Daily VOC Emissions	159.4 lb/day			
Annual VOC Emissions (from annual tab)				
Total Annual VOC Emissions	7,092.6 lb/yr			
Annual & Daily TAC Emissions				
CAS or DEQ ID	TAC	TAC Speciation Factor (lb/lb-VOC)	Emissions (lb/yr)	Emissions (lb/day)
526-73-8	1,2,3 Trimethylbenzene	0.00007058	0.50	0.01
95-63-6	1,2,4 Trimethylbenzene	0.00039799	2.82	0.06
108-67-8	1,3,5 Trimethylbenzene	0.00015565	1.10	0.02
540-84-1	2,2,4 Trimethylpentane	0.01543471	109.47	2.46
91-57-6	2 Methyl naphthalene	0.00000183	0.01	0.00
71-43-2	Benzene	0.00549442	38.97	0.88
110-82-7	Cyclohexane	0.00452826	32.12	0.72
100-41-4	Ethyl benzene	0.00141423	10.03	0.23
110-54-3	Hexane	0.02169322	153.86	3.46
78-79-5	Isoprene, except from vegetative er	0.00026761	1.90	0.04
98-82-8	Isopropylbenzene (cumene)	0.00004279	0.30	0.01
108-38-3	m Xylene	0.00267533	18.98	0.43
91-20-3	Naphthalene	0.00000597	0.04	0.00
95-47-6	o Xylene	0.00125055	8.87	0.20
106-42-3	p Xylene	0.00116709	8.28	0.19
108-88-3	Toluene	0.013467	95.52	2.15
1330-20-7	Xylene (mixture), including m-xylene	0.00509297	36.12	0.81
Notes and References:				
ORVR= Onboard Refueling Vapor Recovery				
Tank filling emission factor from CARB "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (2013) - Table IV-I (uncontrolled emission factor, UEF, i.e., no vapor recovery system).				
Breathing emission factor from US EPA AP-42, Table 5.2-7.				
Refueling emission factor with no ORVR based on DEQ 2018 GDF VOC Estimates.				
Refueling emission factor with ORVR based on DEQ 2018 GDF VOC Estimates.				
Spillage emission factor from CARB "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (2013) - Table VI-I.				
Hose permeation emission factor from CARB "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (2013) - Table VII-I.				
Calculate TAC emissions based on TAC Speciation for Gasoline (California Air Resources Board Speciation Profiles, highest weight fraction for each TAC from from Profile 691 ("Headspace vapors E10 summer gasoline fuel") and Profile 695 ("Headspace vapors E10 winter gasoline fuel") provided by Oregon DEQ.				

Seneca Sawmill Company - 207459									
Emission Calculations									
Table 13 - Paint Booth Emissions - AIA									
Toxics Emission Unit ID: Paint Booth									
Emission Point(s): EP15									
General Description of Calculation Methodology:									
Seneca expects only limited painting in the new paint booth. Particulate emissions are estimated based on a 35% overspray (65% transfer efficiency) and then a 98% filter efficiency for overspray filtration. VOCs are assumed to entirely emitted in the booth. The PTE is based on the maximum projected painting and is very conservative considering the booth will be for non-production related activities.									
Max Projected Emissions									
ROYAL EXTERIOR ACRYLIC LATEX PAINT & PRIMER SATIN, NEUTRAL TINT BASE									
VOC Emissions	gal/week	gal/yr	VOC (lb/gal)	VOC (lbs/day)	VOC (lbs/yr)				
Color Paint	5	250	0.367	1.84	91.8				
Primer	5	250	0.367	1.84	91.8				
				3.67	183.64				
PM Emissions	Solids (lb/gal)	PM overspray	PM control eff	PM (lbs/day)	PM (lbs/yr)				
Color Paint	3.619	35%	98%	0.127	6.3				
Primer				0.127	6.3				
S15 Total				0.25	12.67				
	VOC	44 g/L							
	Density	9.55 lb/gal							
CAS No.	Chemical	Wt %	Federal HAP	CAO Air Toxic	Emissions (lb/day)	Emissions (lb/yr)			
37244-96-5	Nepheline syenite	12.5	No	No					
1314-13-2	Zinc oxide	3	No	Yes	0.0004	0.02			
25265-77-4	Propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol	3	No	No					
68439-57-6	Sodium C14-C16 olefin sulfonate	0.3	No	No					
Concentrations from SDS. Zn oxide listed as 1-5%.									

Emission Calculations

Table 14 - Electric Arc Welding Emissions - AIA

[illegible]

Fab & Truck Shop Welding

[illegible]

CAS or DEQ ID	TAC	EF (lbs/1000 lbs)	Emissions (lb/yr)	Emissions (lb/day)
Criteria Pollutant	PM / PM10 / PM2.5	12.2	62.708	0.18
18540-29-9	Chromium VI, chromate and dichromate particulate	0.002	1.03E-02	3.00E-03
7440-48-4	Cobalt and Compounds	0.001	5.14E-03	1.50E-03
7439-96-5	Manganese and Compounds	0.662	3.40E+00	9.93E-01
365	Nickel compounds, insoluble	0.004	2.06E-02	6.00E-03

CAS or DEQ ID	TAC	PM10 EF (lb/1000 lb)	Fume Correction Factor	Wt% per SDS (max of any column)	SDAPCD Calculated EF (lbs/1000 lbs)	Emissions (lb/yr)	Emissions (lb/day)
7429-90-5	Aluminum and Compounds	12.2	1	8%	0.98	5.02E+00	1.46E-01
1309-64-4	Antimony trioxide	12.2	1	1%	0.12	6.27E-01	1.83E-01
7440-39-3	Barium and compounds	12.2	1	14%	1.71	8.78E+00	2.56E-01
239	Fluorides	12.2	1	26%	3.17	1.63E+01	4.76E-01
7440-50-8	Copper and compounds	12.2	1	2%	0.24	1.25E+00	3.66E-01
7631-86-9	Silica, crystalline (respirable)	12.2	1	2%	0.244	1.25E+00	3.66E-01
1313-27-5	Molybdenum Trioxide	12.2	1	3.0003%	0.37	1.88E+00	5.49E-01

Notes:

Emission factors from ODEQ 2020 Air Toxics Emissions Inventory Welding Emission Factor Search Tool. For TACs not in tool, use the San Diego Air Pollution Control District's Welding Operations methodology to develop emissions estimates for all Toxic Air Contaminants (TACs) present in welding products.

The weight percent of molybdenum is reported as molybdenum trioxide. The percentages for for Aluminum Oxide and Aluminum from the SDS were added together and reported as "Aluminum and Compounds".

Inorganic chemicals designated with "and compounds" and Fluorides are reported as the sum of all forms of the chemical, expressed as the inorganic element and this adjustment is made in the "Wt% per SDS" column.

San Diego Air Pollution Control District, Welding Operations, Revised July 11, 2022. Available at:

Seneca Sawmill Company - 207459															
Emission Calculations															
Table 15 - Metal Cutting Emissions (Plasma and Oxyfuel Torch) - AIA															
Emission Unit ID: MCUT															
Emission Point: MCUT															
Description: Plasma and oxy-acetylene torch cutting of metal in the fabrication shop.															
General Description of Calculation Methodology															
PM and metal emissions are based on "Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel" by Bromsen B. et al. (1994). Only mild steel is cut and mild steel fume is 67-73% iron, 2-10% manganese, and ND-1.4% copper. We are conservatively using the upper end of range. The fume generation rate was selected to be 0.5% for semi-dry because the water reservoir is directly below the plate being cut.															
NOx emissions are based on the same reference, with the NOx emissions at 3.1 L/ters/min for 8mm mild steel being the basis. 3.1 L/min equates to 0.573 lb/hr assuming ideal gas volume and a molecular weight based on 92% NO and 8% NO2 based on Bromsen et al. NOx emissions increase with thickness of metal, with 4" material assigned a factor of 4x, and the thinnest material assigned a factor of 0.25x, based on an extrapolation from Bromsen et al.															
Plasma Torch Operating Hours															
5 hrs/day max															
500 hrs/yr max															
Oxy-Acetylene Torch Operating Hou															
1 hrs/day max															
50 hrs/yr max															
PM/PM10/PM2.5 Emissions															
Molecular Wt.															
g/mol															
NO															
30															
NO2															
46															
Mix (92% / 8%)															
31.3															
Unit Identification															
Cutting Technique															
Metal Type															
Metal Thickness (Inches)															
Kerf (Inches)															
Metal Cutting Speed (IPM)															
Density (g/cm³)															
Density Conversion (lb/in³)															
Fume Generated (% of Material Removed)															
PM/PM2.5/PM10 Emission Factor (lb/inch)															
Metal Feed Rate (IPH)															
PM Emissions (lb/hr)															
Daily Cutting Hours															
Annual Cutting Hours															
PM Emissions (lb/day)															
PM Emissions (lb/yr)															
Plasma															
Semidry															
Mild steel															
0.0359															
0.01															
200															
7.84															
0.28															
0.5															
0.000001															
12000															
0.01															
5															
500															
0.03															
3.05															
Plasma															
Semidry															
Mild steel															
0.125															
0.06															
148															
7.84															
0.28															
0.5															
0.000011															
8880															
0.09															
5															
500															
0.47															
47.16															
Plasma															
Semidry															
Mild steel															
0.25															
0.075															
110															
7.84															
0.28															
0.5															
0.000027															
6600															
0.18															
5															
500															
0.88															
87.63															
Plasma															
Semidry															
Mild steel															
0.375															
0.099															
110															
7.84															
0.28															
0.5															
0.000053															
6600															
0.35															
4															
500															
1.39															
173.50															
Plasma															
Semidry															
Mild steel															
0.75															
0.127															
75															
7.84															
0.28															
0.5															
0.000135															
4500															
0.61															
3															
500															
1.82															
303.50															
Plasma															
Semidry															
Mild steel															
1															
0.175															
65															
7.84															
0.28															
0.5															
0.000248															
3900															
0.97															
2															
500															
1.93															
483.27															
Plasma															
Semidry															
Mild steel															
1.75															
0.081															
11.22															
7.84															
0.28															
0.5															
0.000201															
673.2															
0.14															
2															
500															
0.27															
67.57															
Oxy-acetylene															
Semidry															
Mild steel															
2															
0.081															
10.63															
7.84															
0.28															
0.5															
0.000229															
637.8															
0.15															
1															
50															
0.15															
7.32															
Oxy-acetylene															
Semidry															
Mild steel															
2.75															
0.091															
9.055															
7.84															
0.28															
0.5															
0.000354															
543.3															
0.19															
1															
50															
0.19															
9.63															
Oxy-acetylene															
Semidry															
Mild steel															
4															
0.091															
7.055															
7.84															
0.28															
0.5															
0.000515															
423.3															
0.22															
1															
50															
0.22															
10.91															
Wt Avg.															
0.25															
8															
1200															
2.03															
304.05															
NOx Emissions															
Unit Identification															
Cutting Technique															
Metal Type															
Metal Thickness (Inches)															
NOx (L/min)															
NOx (lb/hr)															
Daily Cutting Hours															
Annual Cutting Hours															
NOx Emissions (lb/day)															
NOx Emissions (lb/yr)															
Plasma															
Semidry															
Mild steel															
0.0359															
0.775															
0.143															
5															
500															
0.72															
71.58															
Plasma															
Semidry															
Mild steel															
0.125															
1.86															
0.344															
5															
500															
1.72															
171.79															
Plasma															
Semidry															
Mild steel															
0.25															
2.325															
0.429															
5															
500															
2.15															
214.73															
Plasma															
Semidry															
Mild steel															
0.375															
3.1															
0.573															
4															
500															
2.29															
286.31															
Plasma															
Semidry															
Mild steel															
0.75															
3.875															
0.716															
3															
500															
2.15															
357.89															
Plasma															
Semidry															
Mild steel															
1															
4.65															
0.859															
2															
500															
1.72															
429.47															
Plasma															
Semidry															
Mild steel															
1.75															
6.2															
1.145															
2															
500															
2.29															
572.62															
Oxy-acetylene															
Semidry															
Mild steel															
2															
6.975															
1.288															
1															
50															
1.29															
64.42															
Oxy-acetylene															
Semidry															
Mild steel															
2.75															
9.3															
1.718															
1															
50															
1.72															
85.89															
Oxy-acetylene															
Semidry															
Mild steel															
4															
12.4															
2.290															
1															
50															
2.29															
114.52															
Wt Avg.															
0.63															
8															
1200															
5.05															
758.23															
HAP / TAC Emissions															
Using mild steel factors															
CAS No.															
Pollutant															
Fume Percent															
lb/lb PM															
lb/hr cut															
TAC Emissions (lb/day)															
TAC Emissions (lb/yr)															
7439-96-5															
Manganese and compounds															
10.0%															
0.100															
0.025															
0.203															
30.40															
7440-50-8															
Copper and compounds															
1.4%															
0.014															
0.004															
0.028															
4.26															
0.224															
14.65															

Seneca Sawmill Company - 207459				
Attachment B - Emission Calculations				
Table 16 - Diesel Emergency Generator Emissions - CIA				
Toxics Emission Unit ID: CIA-1				
Emission Points: Egen_1				
Description: Office Diesel Emergency Generator				
Operating Parameters & Input Assumptions:				
Fuel Usage Rate	11.7	gal/hr		
Max. Daily Operating Hours	4	hrs/day	0.0468	Mgal/day
Max Annual Operating Hours	100	hrs/yr	1.17	Mgal/yr
CAS or DEQ ID	TAC	EF (lbs/M gal)	Emissions (lb/yr)	Emissions (lb/day)
106-99-0	1,3-Butadiene	2.17E-01	2.54E-01	1.02E-02
91-57-6	2-Methyl naphthalene	1.23E-02	1.44E-02	5.76E-04
83-32-9	Acenaphthene	7.35E-04	8.59E-04	3.44E-05
208-96-8	Acenaphthylene	8.10E-04	9.47E-04	3.79E-05
75-07-0	Acetaldehyde	7.83E-01	9.16E-01	3.67E-02
107-02-8	Acrolein	3.39E-02	3.97E-02	1.59E-03
7664-41-7	Ammonia	2.90E+00	3.39E+00	1.36E-01
120-12-7	Anthracene	4.52E-04	5.29E-04	2.12E-05
7440-36-0	Antimony and compounds	3.18E-04	3.72E-04	1.49E-05
7440-38-2	Arsenic and compounds	2.77E-04	3.24E-04	1.30E-05
7440-39-3	Barium and compounds	3.74E-04	4.37E-04	1.75E-05
56-55-3	Benz[a]anthracene	4.85E-05	5.68E-05	2.27E-06
71-43-2	Benzene	1.86E-01	2.18E-01	8.72E-03
50-32-8	Benzo[a]pyrene	1.44E-05	1.68E-05	6.73E-07
205-99-2	Benzo[b]fluoranthene	4.44E-05	5.19E-05	2.08E-06
192-97-2	Benzo[e]pyrene	3.29E-05	3.85E-05	1.54E-06
191-24-2	Benzo[g,h,i]perylene	2.19E-05	2.56E-05	1.02E-06
207-08-9	Benzo[k]fluoranthene	1.31E-05	1.53E-05	6.11E-07
7440-41-7	Beryllium and compounds	4.77E-06	5.58E-06	2.23E-07
7440-43-9	Cadmium and compounds	8.08E-05	9.45E-05	3.78E-06
18540-29-9	Chromium VI, chromate and dichromate particulate	3.51E-04	4.10E-04	1.64E-05
218-01-9	Chrysene	6.70E-05	7.84E-05	3.14E-06
7440-48-4	Cobalt and compounds	1.58E-05	1.84E-05	7.37E-07
7440-50-8	Copper and compounds	5.02E-04	5.87E-04	2.35E-05
53-70-3	Dibenz[a,h]anthracene	1.04E-06	1.21E-06	4.85E-08
200	Diesel particulate matter	1.70E+01	1.99E+01	7.94E-01
100-41-4	Ethyl benzene	1.09E-02	1.28E-02	5.10E-04
206-44-0	Fluoranthene	3.70E-04	4.33E-04	1.73E-05
86-73-7	Fluorene	2.18E-03	2.56E-03	1.02E-04
50-00-0	Formaldehyde	2.71E+00	3.17E+00	1.27E-01
110-54-3	Hexane	2.69E-02	3.15E-02	1.26E-03
7647-01-0	Hydrochloric acid	1.86E-01	2.18E-01	8.72E-03
193-39-5	Indeno[1,2,3-cd]pyrene	1.07E-05	1.25E-05	5.01E-07
7439-92-1	Lead and compounds	3.64E-04	4.25E-04	1.70E-05
7439-96-5	Manganese and compounds	4.20E-04	4.91E-04	1.97E-05
7439-97-6	Mercury and compounds	1.51E-05	1.77E-05	7.07E-07
91-20-3	Naphthalene	2.64E-02	3.08E-02	1.23E-03
365	Nickel compounds, insoluble	1.82E-04	2.13E-04	8.53E-06
198-55-0	Perylene	1.18E-06	1.38E-06	5.51E-08
85-01-8	Phenanthrene	4.54E-03	5.31E-03	2.13E-04
504	Phosphorus and compounds	8.40E-03	9.83E-03	3.93E-04
7782-49-2	Selenium and compounds	3.76E-04	4.40E-04	1.76E-05
7440-22-4	Silver and compounds	4.80E-05	5.62E-05	2.25E-06
7440-28-0	Thallium and compounds	2.40E-04	2.81E-04	1.12E-05
108-88-3	Toluene	1.05E-01	1.23E-01	4.93E-03
1330-20-7	Xylene (mixture), including m-xylene, o-xylene, p-xy	4.24E-02	4.96E-02	1.98E-03
7440-66-6	Zinc and compounds	5.23E-03	6.11E-03	2.45E-04
Notes:				
Emission factors from ODEQ 2020 Air Toxics Emissions Inventory Combustion Emission Factor Search Tool, based on SCAQMD AB2588 - Default Emission Factors for Fuel Combustion, Table B-2 Internal; DEQ Approved Data Center EF Analysis May 2022.				

LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT

ACDP	Air Contaminant Discharge Permit	MMBtu	Million British thermal units
AQMA	Air Quality Management Area	MMCF	Million cubic feet
ACS	Applied coating solids	NA	Not applicable
Act	Federal Clean Air Act	NESHAP	National Emission Standards for Hazardous Air Pollutants
ASTM	American Society of Testing and Materials	NO _x	Nitrogen oxides
BDT	Bone dry ton	NSPS	New Source Performance Standards
Btu	British thermal unit	NSR	New Source Review
CAM	Compliance Assurance Monitoring	O ₂	Oxygen
CAO	Cleaner Air Oregon	OAR	Oregon Administrative Rules
CD ID	Control device identifier	ODEQ	Oregon Department of Environmental Quality
CEMS	Continuous Emissions Monitoring System	OPR	Operation
CFR	Code of Federal Regulations	ORS	Oregon Revised Statutes
CI	Compression Ignition	O&M	Operation and maintenance
CMS	Continuous Monitoring System	Pb	Lead
CO	Carbon Monoxide	PCD	Pollution Control Device
CO ₂	Carbon dioxide	PM	Particulate matter
CO _{2e}	Carbon dioxide equivalent	PM _{2.5}	Particulate matter less than 2.5 microns in size
COMS	Continuous Opacity Monitoring System	PM ₁₀	Particulate matter less than 10 microns in size
CPDS	Certified Product Data Sheet	ppm	Parts per million
CPMS	Continuous parameter monitoring system	PSEL	Plant Site Emission Limit
DEQ	Department of Environmental Quality	psia	pounds per square inch, actual
dscf	Dry standard cubic feet	PTE	Potential to Emit
EF	Emission factor	QIP	Quality Improvement Plan
EPA	US Environmental Protection Agency	RICE	Reciprocating Internal Combustion Engine
EU	Emissions Unit	SACC	Semi-Annual Compliance Certification
EU ID	Emission unit identifier	SCEMP	Surrogate Compliance Emissions Monitoring Parameter
FCAA	Federal Clean Air Act	Scf	Standard cubic foot
FHAP	Federal Hazardous Air Pollutants as defined by LRAPA Title 12	SDS	Safety data sheet
ft ²	Square foot	SER	Significant emission rate
FSA	Fuel sampling and analysis	SERP	Source emissions reduction plan
gal	Gallon	SI	Spark Ignition
GHG	Greenhouse Gas	SIC	Standard Industrial Code
GMAW	Gas metal arc welding	SIP	State Implementation Plan
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)	SO ₂	Sulfur dioxide
HCFC	Halogenated Chlorofluorocarbons	ST	Source test
Hr	Hour	TAC	Toxic air contaminant
ID	Identification number or label	TACT	Typically Achievable Control Technology
I&M	Inspection and maintenance	TBI	To be installed
Lb	Pound	TEU	Toxic Emission Unit
LRAPA	Lane Regional Air Protection Agency	TPY	Tons per year
MACT	Maximum Achievable Control Technology	VE	Visible emissions
MBF	Thousand board feet	VMT	Vehicle miles traveled
MERV	Minimum efficiency reporting values	VOC	Volatile organic compounds
MM	Million	VHAP	Volatile hazardous air pollutant
		Year	A period consisting of any 12-consecutive calendar month