CAO Modeling Protocol and Risk Assessment Work Plan (Revision)

Freres Lumber Co. Inc.—Lyons, Oregon

Prepared for:

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Cleaner Air Oregon Air Toxics Program

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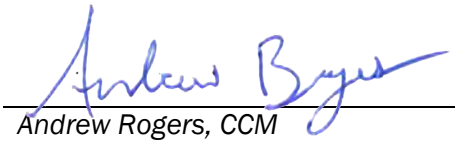
Freres Lumber Co. Inc.—Lyons, Oregon

The material and data in this report were prepared under the supervision and direction of the undersigned.

Maul Foster & Alongi, Inc.



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Abbreviations and Acronyms

ASOS	Automated Surface Observation Systems
BPIP	Building Profile Input Program
CAO	Cleaner Air Oregon
DEQ	Department of Environmental Quality (Oregon)
existing permit	Title V Operating Permit No. 22-6002-TV-01 issued by the DEQ on July 10, 2020
EPA	U.S. Environmental Protection Agency
ESP	dry electrostatic precipitator
Freres	Freres Lumber Co., Inc.
g/s	gram per second
Mbdft	thousand board feet
MFA	Maul Foster & Alongi, Inc.
OAR	Oregon Administrative Rule
RAL	risk action level
RAWP	Risk Assessment Work Plan
RBC	risk-based concentration
the facility	wood product manufacturing complex (Plant 1, Plant 2, Plant 4, and a Stud Mill) located at 141 14th Street, Lyons, Oregon 97358
TAC	toxic air contaminant
TEU	toxic emissions unit
two-year period	data downloaded for the most current two-year calendar period, January 1, 2022 to December 31, 2024
ug/m^3	microgram per cubic meter

1 Introduction

Freres Lumber Co., Inc. (Freres) owns and operates a wood product manufacturing complex, composed of Plant 1, Plant 2, Plant 4, and a Stud Mill, located at 141 14th Street in Lyons, Oregon (the "facility"). The facility currently operates under Title V Operating Permit No. 22-6002-TV-01 (existing permit) issued by the Oregon Department of Environmental Quality (DEQ) on July 10, 2020. The DEQ is currently in the process of issuing an updated Title V permit for the facility.

Maul Foster & Alongi, Inc. (MFA) has been retained by Freres to assist the facility with the Cleaner Air Oregon (CAO) permitting process. On March 31st, 2025, Freres submitted a timely toxic air contaminant (TAC) emissions inventory to the DEQ for review and approval to satisfy the initial step of the CAO permit application process as specified in Oregon Administrative Rule (OAR) 340-245-0040(3). The DEQ completed internal review and, after two revisions, approved the TAC emissions inventory on December 15, 2025 (DEQ-approved emission inventory).

As stated in OAR 340-245-0030(1)(b), a modeling protocol must be submitted no later than 30 days after receiving DEQ approval of the emission inventory. As the approval occurred on December 15, 2025, the modeling protocol is due January 15, 2025. Freres intends to conduct a Level 3 Risk Assessment to estimate the potential excess cancer risk and chronic and acute noncancer risk (expressed numerically as the chronic and acute hazard index) impacts from the facility for comparison to the applicable risk action levels (RALs) shown in OAR 340-245-8010 Table 1.

Freres is submitting a single document that will incorporate the required components of both the Modeling Protocol and a Risk Assessment Work Plan (RAWP). The remainder of this combined Modeling Protocol and RAWP outlines the proposed modeling and RAWP methodology and specific information required by OAR 340-245-0210.

1.1 Facility Location

The facility is located in Lyons, Oregon. An aerial image of the facility location and the property boundary is shown in Figure 1-1. The area immediately to the north of the facility is characterized by a mixture of land-use zoning including residential, mixed-use, and industrial. The area to the south of the facility is characterized by mountainous forests. Existing land-use zoning information for the area surrounding the facility is discussed in Section 4.2. The topography of the area surrounding the facility is presented in Figure 1-2.

1.2 Facility Process Description

The facility consists of two green veneer manufacturing plants, a stud mill, two steam and natural gas heated veneer dryers, a Wellons hogged fuel boiler (Boiler 3) with cogeneration of electricity, and a propane fired backup boiler (Boiler 2).

Logs brought to the facility are sorted and stacked in log decks. Logs are debarked, cut to length and softened in steam tunnels prior to peeling. Boiler 3 provides process steam to the tunnels and veneer dryers. The softened logs are peeled in one of two lathes in either Plant 1 or 2. Green veneer

from the lathes is sorted by grade and size and either sold or dried in one of the two steam and natural gas heated veneer dryers of Plant 4. Exhaust gases from the veneer dryers are routed to Boiler 3 as combustion air. The dried veneer is packaged and shipped off site for plywood production. Approximately 30 percent of the veneer goes to Freres' Plant 3 in Mill City for plywood production. Peeler cores are processed into stud-length dimensional lumber in the Stud Mill or sold. Excess steam from Boiler 3 is converted into electricity via a turbine generator.

The facility includes several additional toxic emission units (TEUs) that are not directly used in the manufacturing process including a diesel-fueled fire pump, an emergency power propane fueled generator, a cooling tower, a gasoline dispensing facility, and facility-wide maintenance welding.

A process flow diagram outlining the facility TEUs was provided to the DEQ as part of the emissions inventory portion of the CAO program.

2 Emission Estimates and Model Sources

Daily and annual TAC emission estimates for the process equipment considered to be TEUs, as defined in OAR 340-245-0020(59), were prepared by the facility as shown in the DEQ-approved TAC emissions inventory. The DEQ-approved annual and daily TAC emission estimates for significant TEUs will be converted to units of grams per second (g/s) for purposes of conducting the Level 3 Risk Assessment as shown in Table 2-1 and Table 2-2, respectively. MFA proposes to use risk-equivalent emission rates to evaluate acute noncancer risk from the significant TEUs at the facility, as shown in Table 2-3. The DEQ-approved annual and daily emission rates for gas-exempt TEUs are shown in Table 2-4 and Table 2-5, respectively.

Additional information on how the TAC emission estimates and risk-equivalent emission rates will be used in the level 3 Risk Assessment are provided in Section 4, below. The location of each significant and gas-exempt TEU is provided in Figure 2-1.

2.1 Significant TEUs

The facility has several TEUs classified as a Significant TEU per OAR 340-245-0020(52). The following subsections detail each Significant TEU at the facility.

2.1.1 Hogged Fueled Boiler (BLR3)

Under normal operating conditions, exhaust from the hogged fuel boiler (Boiler 3) is routed through a multi-cone and dry electrostatic precipitator (ESP) for control of particulate matter. During cold startups, exhaust from Boiler 3 is routed through the multi-clone and the uncharged ESP. The exhaust from Boiler 3 gradually raises the temperature to a level suitable for energizing the ESP or approximately 200 degrees Fahrenheit (°F). During shutdowns, exhaust continues to pass through the charged ESP until combustion of the wood fuel ceases. For this reason, MFA proposes that boiler shutdown periods not be included, as Boiler 3 will remain fully controlled by the energized ESP.

The exhaust stack for Boiler 3 will be represented in the air dispersion model as an individual vertical point source. Boiler 3 will have two labels: one for normal operating conditions (**BLR3**) and one for startup conditions (**BLR3_SU**). During Boiler 3 startup conditions, the exhaust temperature is expected to be lower than during normal operations. No data from Boiler 3 are available to identify the exact temperature during this time. As a result, MFA proposes to use an exhaust temperature of 200 degrees Fahrenheit during Boiler 3 startup conditions as it represents the minimum temperature needed for the ESP to become fully charged. Because several fans are used between Boiler 3 and the uncharged ESP, the facility does not expect there to be a difference in airflow during Boiler 3 startup conditions. As a result, MFA assumed these parameters were the same as during normal conditions.

The proposed release parameters for **BLR3** and **BLR3_SU** are presented in Table 2-6.

2.1.2 Log Conditioning Steam Tunnels (TUNS1/TUNS2)

The facility uses two steam tunnels to condition the logs prior to peeling process. Steam is provided by Boiler 3. Exhaust from the two steam tunnels is emitted to the atmosphere through a series of open bay doors on the front end of each respective building. As a result, MFA proposes to represent the steam tunnels as volume sources in the dispersion model. Steam tunnel 1 will be represented in the dispersion model as three volume sources with unique IDs (**TUNS1A**, **TUNS1B**, **TUNS1C**) and steam tunnel 2 will be represented as four volume sources with unique IDs (**TUNS2A**, **TUNS2B**, **TUNS2C**, **TUNS2D**). The proposed release parameters for **TUNS1A**, **TUNS1B**, **TUNS1C**, **TUNS2A**, **TUNS2B**, **TUNS2C**, and **TUNS2D** are presented in Table 2-6.

2.1.3 Veneer Dryers (VD_HEAT1/VD_HEAT2)

Green veneer is conveyed from the lathes to a dryer in either Plant 2 (VD_HEAT1) or Plant 4 (VD_HEAT2) at the facility. Heat for the veneer dryers is provided by Boiler 3 and two auxiliary natural gas burners. Exhaust gases from the veneer dryers are routed back to Boiler 3 as combustion air. As identified in the existing permit, 98 percent of the exhaust gases from the veneer dryer are estimated to be routed to Boiler 3, where 90 percent of the emissions are destroyed via thermal combustion. The remaining 10 percent of veneer dryer exhaust gases are emitted to atmosphere through the ESP stack (**BLR3**). The two percent of exhaust gases assumed not to be routed to Boiler 3 are emitted as fugitives through the veneer dryer heating zone roof vents.

Emissions from the controlled portion of veneer dryers will be added to unique ID **BLR3** in the dispersion model. Fugitive emissions from the veneer dryers emitted to atmosphere via the heating zone roof vents will be modeled as a volume source in the dispersion model using unique ID **DRY_FUG**.

The proposed release parameters for **BLR3** and **DRY_FUG** are presented in Table 2-6.

2.1.4 Gasoline Dispensing Facility (GDF)

The facility uses a single gasoline dispensing facility, which consists of two 6,000-gallon above ground storage tanks and associated dispensing equipment to fuel operations vehicles. The gasoline dispensing facility will be represented in the dispersion model as a volume source with unique ID (**GDF**).

The proposed release parameters for the **GDF** TEU are presented in Table 2-6.

2.1.5 Cooling Tower (CT)

A two-cell cooling tower is used to provide heat relief for several processes at the facility. A biocide is added to the cooling tower to prevent accumulation of organics within the system. Each cell in the cooling tower will be represented in the dispersion model as a vertical point source with unique IDs (**CT01** and **CT02**).

The proposed release parameters for **CT01** and **CT02** are presented in Table 2-6.

2.1.6 Emergency Diesel Generator Fire Pump (FIRE)

A diesel fire pump is used at the facility to provide support for emergency firefighting activities. The diesel fire pump will be represented in the air dispersion model as a horizontal point source with unique ID **FIRE**.

The proposed release parameters for the **FIRE** TEU are presented in Table 2-6.

2.1.7 Welding (WELD)

Welding activities (TEU ID WELD) occur in five separate locations in the facility including Plant 1, Plant 2, Plant 4, Cat Shop, and the Fabrication shop. It is expected that any emissions from the welding activities will enter the atmosphere as fugitives through roof and wall vents. Emissions from the welding activities will be represented in the model as five individual volume sources with model IDs as follows: Plant 1 (**WELD_P1**), Plant 2 (**WELD_P2**), Plant 4 (**FUG_P4**), Cat Shop (**CAT_SHOP**), and the Fabrications Shop (**FAB_SHOP**). For **WELD_P1**, **WELD_P2**, and **FUG_P4**, the length of side for each volume source will be estimated based on the size of the building opening nearest each source. For **CAT_SHOP** and **FAB_SHOP**, the length of the side for each volume source will be the size of the shop building.

The proposed release parameters for **WELD_P1**, **WELD_P2**, **FUG_P4**, **CAT_SHOP**, **FAB_SHOP** are presented in Table 2-6.

2.1.8 Product Paint and Ink Application (MB)

Finished product paint and ink application activities are performed at Plant 1, Plant 2, Plant 4, the Cat Shop and the Fabrications Shop at the facility and will be represented in the air dispersion model as individual volume sources with model IDs **MB_P1**, **MB _P2**, **FUG _P4, CAT_SHOP,** and **FAB_SHOP**, respectively. For **MB_P1**, **MB_P2**, and **FUG_P4**, the length of side for each volume source will be estimated based on the size of the building opening nearest each source. For **CAT_SHOP** and **FAB_SHOP**, the length of the side for each volume source will be the size of the shop building. In the case of Plant 4, the Cat Shop and the Fabrication Shop, welding activities and product paint and ink application occur at the same location. As a result, TAC emissions from both welding and paint and ink application will be combined and modeled together from a single volume source, as shown in Tables 2-1 and 2-2.

The proposed release parameters for **MB_P1**, **MB_P2**, **FUG_P4**, **CAT_SHOP**, **FAB_SHOP** are presented in Table 2-6.

2.2 Gas Combustion Exempt TEUs

The facility has several TEUs which meet the definition of exempt gas combustion TEUs as described in OAR 340-245-0050(5). The following subsections detail each exempt gas combustion TEU at the facility.

2.2.1 Propane Fueled Boiler (BLR2)

Boiler 2 is a propane combustion boiler that is used to provide backup steam to the steam tunnels and/or veneer dryers in the event Boiler 3 must be taken offline. The exhaust stack for Boiler 2 will be represented in the air dispersion model as a capped point source with a unique ID (**BLR2**).

The proposed release parameters for **BLR2** are presented in Table 2-6

2.2.2 Natural Gas Dryer Auxiliary Burners (VD1_NG/VD2_NG)

There are two dryer auxiliary burners that use natural gas combustion to supply heat to the veneer dryers. Exhaust from the dryer burners is routed to and controlled by Boiler 3. Natural gas combustion from Dryer 1 and Dryer 2 has unique TEU IDs of VD1_NG and VD2_NG, respectively.

As identified in the existing permit, 98 percent of the exhaust from the veneer dryers and natural gas combustion are estimated to go to Boiler 3 for emissions control, while the remaining two percent are emitted to atmosphere as fugitives via the roof vents above the veneer dryers. As a result, controlled emissions from the natural gas combustion will be modeled through the ESP stack (**BLR3_NG**) while fugitive natural gas combustion emissions will be modeled through the roof vents above the veneer dryer heated zones (**DRY_FUG_NG**).

The proposed release parameters for **BLR3_NG** and **DRY_FUG_NG** are presented in Table 2-6

2.2.3 Propane Emergency Generator

The facility uses an emergency propane-fueled generator to provide power during loss of utility services to the operations control building. The emergency propane generator uses a rich burn spark ignition engine. The emissions from the emergency propane generator will be represented in the air dispersion model as a vertical point emission type with unique ID **(EGEN_P)**.

The proposed release parameters for **EGEN_P** are presented in Table 2-6

3 Air Dispersion Modeling Methodology

The following subsections detail the proposed air dispersion model methodology, including input parameters and assumptions applicable to the level 3 risk assessment dispersion model.

3.1 Model Selection

MFA proposes to execute the dispersion model using the model versions shown in Table 3-1. Lakes Environmental, a third-party overlay software, will be used to execute the dispersion model.

Table 3-1. Model Selection

Model	Model Version
AERMOD	24142
AERMET	24142
AERMAP	24142
AERSURFACE	24142
AERMINUTE	15272
BPIP	04274

3.2 Meteorological Data

MFA proposes to use data from the meteorological stations and sources, as shown in Table 3-2

Table 3-2. Meteorological, Land Use, and Terrain Data

Dataset	Data Reference
Site Specific	Station ID PC142 for Mill City, OR (MesoWest and Synoptic PBC Data Archive)
Surface ASOS 1-minute	Station ID 24232 for Salem, OR (National Oceanic and Atmospheric Administration)
Upper Air	Station ID 24232 for Salem, OR (National Oceanic and Atmospheric Administration/ Earth System Research Laboratory Radiosonde Database)
Land Use	State of Oregon National Land Cover Data Set 2023 (U.S. Geological Survey)
Terrain	1/3-arc seconds with horizontal resolution of 10 meters (U.S. Geological Survey National Elevation Dataset)

3.2.1 Site Specific Meteorological Data

MFA did not identify any National Weather Service (NWS) meteorological stations near the facility that would be considered representative of the facility. As a result, MFA reviewed alternate sources of meteorological data closer to the facility that could potentially be more representative. MFA identified two utility meteorological stations, Lyons East station (ID PC157) and Mill City station (PC142), located approximately 2.5 and 11.5 kilometers southeast of the facility, respectively. Both stations became operational in April 2022 and are owned and operated by PacificCorp and the Western Weather Group, respectively.

MFA reviewed the stations to determine if one or both meet the U.S. Environmental Protection Agency (EPA) siting and exposure requirements and data completeness criteria[1] to be suitable for regulatory dispersion modeling and if either station could be considered representative of conditions at the facility. Ten-minute average temperature, dew point, relative humidity, wind speed and direction, and precipitation data were downloaded for the most current two-year calendar period, January 1, 2023 to December 31, 2024 (two-year period). Upon review, MFA identified that both stations meet the necessary requirements for regulatory dispersion modeling. The results of the review are as follows:

[1] (EPA, 2008) *Quality assurance handbook for air pollution measurement systems. Vol. IV, meteorological measurements, ver. 2.0. EPA-454/B-08-002. U.S. Environmental Protection Agency. March.*

Station Siting and Exposure

As shown in Figure 1-1, both stations are located within the same northwest-southeast-oriented North Santiam Valley as the facility. Both stations are located in relatively open terrain with minimal obstructions that could potentially disrupt typical wind patterns. MFA did identify a conifer tree located approximately 30 meters to the northeast of the Lyons East station that is taller than 10 meters. However, there does not appear to be an obvious reduction in frequency of wind monitored from this direction, as shown in the windrose in Figure 3-1. Both stations are located at a height of 10 meters above ground level on power line poles. One notable observation is that the Lyons East station is located adjacent to agricultural fields which may have an impact on monitored relative humidity and dewpoint data during periods when daily watering occurs. The Mill City station is located in an open field not used for agricultural purposes.

Data Completeness

In order for a site-specific meteorological station to be valid for dispersion modeling, a minimum of one year of data must be collected (EPA, 2008). Both stations began operating in April 2022 and have two full calendar years of data (January 1, 2023 to December 31, 2024), which meets this requirement. Section 8.4.4.2(a) of Appendix W[2] requires that, at a minimum, ambient temperature, wind speed and wind direction data must be monitored by the site-specific station. As identified above, both stations monitor these three variables in addition to relative humidity, dew point and precipitation.

Data completeness and calm percentages for each station during the two-year period are provided in Table 3-3. Both stations meet the EPA-required 90 percent completeness criteria for all quarters of the two-year period and have a low percentage of calm winds. Comparatively, both stations have a similar number of missing data and calm winds.

Site Representativeness

Windroses for the Lyons East station and Mill City station are provided in Figure 3-1 and Figure 3-2, respectively. As shown in these two figures, the wind data monitored at both stations have a relatively similar binomial distribution of southwest to northeast. However, the Milly City station has a significantly higher frequency of zonal flow (i.e., west and east) wind, which aligns with the North Santiam Valley.

The elevation of the Lyons East station and Mill City station is 736 feet and 849 feet above mean sea level (msl), respectively. The average elevation of the facility is approximately 720 feet above msl.

Quality Assurance

MFA was unable to obtain any quality assurance documentation from the Western Weather Group specific to either station. However, since both stations started collecting data during the same period and are operated by the same organization, MFA assumes that the quality assurance program for both stations is the same. MFA reviewed the monitored data and did not identify any obvious issues or problems that would lead to questioning the integrity of the data.

[2] Title 40 of the Code of Federal Regulations (CFR) Subpart 51.

After reviewing data from both stations, MFA proposes to use site specific data collected from the Mill City station for the following reasons:

- The Mill City station includes a higher frequency of winds blowing from the west and east, which better aligned with the orientation of the North Santiam Valley at the facility location.
- Unlike the Lyons East station, the Mill City station does not appear to be located adjacent to fields used for agricultural purposes that could potentially be impacted by watering practices. It is important to note that the data do not show any obvious effects from the watering. The Mill City station presents less of an unknown with respect to this variable.
- Unlike Lyons East, the Mill City station has no tall trees nearby. Though the Lyons East windrose (Figure 2-1) shows no clear data gaps for northeast winds, uncertainty remains about how the large conifer tree affects the microclimate at the station. Using data from the Mill City station mitigates the level of unknown associated with the conifer tree.
- The data completeness and low percentage calm winds at either site will produce few hours of non-calculated concentrations by the AERMOD model. As a result, from a data completeness standpoint, there is no difference between the two stations.

3.2.2 Surface Data

Surface meteorological data collected from the Salem McNary Airport monitoring station (McNary met station) (ID 24232) located in Salem, Oregon were used to supplement cloud cover and substitute for any missing data from the Mill City station. Hourly data for wind speed, wind direction, precipitation, solar radiation, relative humidity, barometric pressure, and temperature for the two-year period were collected and used to substitute for missing or unmonitored variables from the Mill City station data. It is important to note that on August 29, 2025, the Integrated Surface Dataset, which contains the cloud cover data used in the AERMET model, was discontinued. As a result, the last complete calendar year is 2024.

MFA proposes to use the Mill City met station instead of the McNary met station as the primary meteorological data source as it is located in the north-south oriented Willamette Valley. As shown in Figure 3-3, wind monitored during the two-year period from the McNary met station closely follows the north-south orientation, which as evident by the wind monitored at the Lyons East and Mill City stations, is not representative of conditions in the North Santiam Valley.

3.2.3 Upper Air Data

Upper-air meteorological data for Salem, Oregon (station ID 24232) were obtained in the Forecast Systems Laboratory format, from the National Oceanic and Atmospheric Administration Earth System Research Laboratory Radiosonde Database. Upper-air meteorological data were extracted for the two-year period.

3.2.4 Data Processing—AERMET

The site-specific, surface, and upper air meteorological data were processed using the AERMET program to produce the two years of model-ready meteorological data for use in the AERMOD dispersion model. The adjustment to the surface frictional velocity (ADJ_U*) option was selected as part of the AERMET processing as the Mill City station did not monitor any turbulence parameters.

The land use surface characteristics were processed using AERSURFACE, and AERMINUTE was used to process and incorporate the ASOS 1-minute wind data into AERMET. A summary of the processing settings that were used for AERMET is shown in Table 3-4.

Table 3-4. AERMET Settings

Parameter	Setting	Reference
Randomize Wind Directions (Yes/No)	No	EPA 2013a
Missing Cloud Cover Substitution (Yes/No)	Yes	EPA 2024a
Missing Temperature Substitution (Yes/No)	Yes	EPA 2024a
Minimum Wind Speed (m/s)	0.50	EPA 2013a
Low Wind Option Enabled? (Yes/No)	Yes	DEQ 2022

3.3 AERSURFACE Land Use and Terrain

State of Oregon National Land Cover Data Set 2023 land cover class definitions, along with concurrent percent impervious surface and percent tree canopy[3] data, were downloaded from the U.S. Geological Survey, and processed using the AERSURFACE settings described in Table 3-5, to generate the surface characteristics necessary to run AERMET.

Table 3-5. Proposed AERSURFACE Settings

Parameter	Setting
Study radius for surface roughness	1.0 kilometer
Are the surface data collected at an airport?	No (Mill City Station) / Yes (McNary Met Station)
Should continuous snow cover be assumed?	No
Is this an arid region?	No
Number of sectors	12
Months assumed to constitute “winter”	December, January, and February
Months assumed to constitute “Spring”	March, April, and May
Months assumed to constitute “Summer”	June, July, and August
Months assumed to constitute “Autumn”	September, October, and November
Period for land use calculations	Monthly

Soil moisture conditions were determined following the methodology set forth in Section 3.2.8 of the EPA User’s Guide for the AERSURFACE Tool, dated November 2024 (AERSURFACE User’s Guide; EPA 2024b). MFA proposes to use precipitation data monitored at the Stayton, Oregon station (ID 358095) as it represents the closest station to the Mill City station with 30 years of continuous data. Precipitation data from the McNary met station was used for soil moisture conditions for the McNary met station.

Annual precipitation data for each year of the two-year period set were reviewed and compared against the 30-year climatological record to determine the representative soil moisture conditions for each modeling year. As shown in Table 3-6, the annual precipitation remained varied between the lower 30th percentile to between the 30th and 70th percentiles of the 30-year climatological record.

[3] The most current available tree canopy for the modeling domain is from the 2016 calendar year.

MFA will execute the air dispersion model using rural dispersion coefficients. To make this determination, MFA followed the land-use procedure, as recommended in Section 7.2.1.1(b) of Appendix W to Part 51 *Guideline on Air Quality Models,* to conclude that less than 50 percent of the land use in the modeling domain is represented by the urban land-use type.

3.4 Emission Unit Locations

The location of each TEU to be included in the dispersion model is shown in Figure 2-1.

3.5 Building Downwash

The current version of the Building Profile Input Program, shown in Table 3-1, will be used. The locations for structures that influence downwash are presented in Figure 2-1. Table 3-7 presents a summary of the proposed building heights to be included in the air dispersion model.

3.6 Proposed Receptor Locations and Terrain

Proposed receptors for the level 3 risk assessment will be defined consistent with Section 2.4 of the DEQ's guidance document, DEQ Recommended Procedures (DEQ 2022) as shown in Table 3-8. Table 3-9, provided in electronic version only, includes coordinates for all receptor locations and their exposure classifications.

3-8: Proposed Receptor Locations

Receptor Spacing (meters)	Receptor Distance (meters)
25	Along the property boundary and out to at least 200 meters from the property boundary.
50	200 to 1,000
100	1,000 to 2,000
200	2,000 to 5,000
500	5,000 to 10,000

Figure 3-4 presents the proposed receptor spacing and locations within the modeling domain. Figure 3-5 presents the proposed receptor locations in the area immediately surrounding the property boundary.

Terrain elevations for proposed model receptors, emission unit base elevations, and downwash structures base elevations will be derived from the US Geological Survey National Elevation Dataset as shown in Table 3-2 and processed using the current version of AERMAP.

3.7 Sensitive Receptors

MFA reviewed an area within 1.5 kilometers of the facility property boundary to identify whether there are any localities considered to be sensitive areas (e.g., schools, hospitals). MFA identified one location, the Mari-Linn School, located approximately 0.8 kilometers northwest of the facility. As the Mari-Linn School is located relatively near the facility, it falls within the denser receptor grid and consequently, there are a number of receptors located on the school property. As a result, MFA does

not propose to add a discrete receptor to the Mari-Linn School has it is adequately represented in the model by existing receptors, as shown in Table 3-9.

At the request of the DEQ, MFA added a discrete receptor near the home located immediately to the southwest of the facility to provide additional coverage to this area. The added receptor will be assessed as a residential exposure location and is shown in Table 3-9.

3.8 Proposed Model Emission Rates

MFA proposes to execute the dispersion model using unit emission rates for annual assessments (excess cancer and chronic noncancer) for significant toxic emission units (TEUs) and all assessments for gas exemption TEUs. The maximum modeled unit concentration in micrograms per cubic meter (ug/m^3) at each modeled receptor for the annual and 24-hour averaging periods will be considered a modeled "dispersion factor" in units of ug/m^3 per g/s. When this dispersion factor is multiplied by the g/s TAC emission rate for the modeled TEU, the result is the modeled concentration of the TAC. Therefore, a single unit emission rate model result can be used to calculate the modeled concentration for each TAC. The dispersion factors, in combination with TAC emission rates for each TEU in g/s and the risk-based concentrations (RBCs) in ug/m^3 set forth under OAR 340-245-8010 Table 2, will be used to conduct the chronic cancer and noncancer Level 3 risk assessments. The DEQ-approved acute and chronic model emission rates for each significant TEU are provided in Table 2-1 and Table 2-2, respectively. The DEQ-approved acute and chronic model emission rates for each exempt gas combustion TEU are provided in Table 2-4 and Table 2-5, respectively.

4 Risk Assessment Work Plan

The following subsections detail the proposed inputs and assumptions that will be used in support of the Level 3 Risk Assessment.

4.1 Conceptual Site Model

Sections 2 through 3 discuss the facility location, process description, TEUs, and TAC emission estimates to satisfy the requirements for a conceptual site model set forth under OAR 340-245-0210(2). Exposure locations are described in more detail below. Specific TEU designations are discussed in more detail in the following subsections.

4.1.1 Gas Combustion TEUs

The specific procedures for assessing the risk of each TEU are dependent on the TEU designation per OAR 340-245-0050(4). Per OAR 340-245-0050(5), the gas combustion "exemption applies to TEUs that solely combust natural gas, propane, [or] liquefied petroleum gas." As identified in Section 2.2, boiler 2 and the propane emergency generator only combust propane and the two dryer auxiliary burners only combust natural gas. As a result, these three TEUs meet the gas exemption

definition for risk assessment purposes and risk will be assessed separately from the significant TEUs.

4.1.2 Aggregated TEUs

A Level 3 Risk Assessment will be conducted that includes all facility TEUs other than those qualifying as a gas combustion TEU or exempt TEU. The facility is not requesting aggregated TEUs at this time.

4.1.3 Significant TEUs

A Level 3 Risk Assessment will be conducted that includes all facility TEUs other than those qualifying under the gas combustion TEU exemption. This assessment will be used to determine whether the facility exceeds the source permit RAL (i.e., de minimis source determination) per OAR 340 245 0050(7). Cancer and noncancer risks will be reported separately for Gas Combustion and Significant TEUs. For compliance demonstration, only calculated risks associated with Significant TEUs will be compared with the applicable RALs.

4.2 Exposure Assessment

4.2.1 Land-Use Zoning Classification Data for Determining Exposure Types

In anticipation of dispersion modeling, the Department of Land Conservation and Development's statewide zoning data were reviewed to determine land-use classifications for areas in the modeling domain. The Oregon statewide zoning classifications provide the basis for the initial categorization of exposure classifications (i.e., residential, nonresidential worker, nonresidential child, or acute).

The zoning data were further evaluated against local data such as the State of Oregon zoning and school-location information. MFA also reviewed aerial imagery, using Esri ArcGIS and Google Earth software to determine whether the existing zoning information reflects actual land use and the corresponding exposure type categorization.

The zoning data and internal MFA review process indicate that multiple proposed receptor locations fall within roadway and/or rail right-of-way interstitial spaces. These locations are proposed for dispersion modeling in order to maintain a uniform receptor grid. MFA proposes that risk will not be evaluated for any receptors located in roadways or rail rights-of-way, which fall into the 25-meter or 50-meter receptor tiers. In the Table 3-9, which will be provided to the DEQ in spreadsheet format because of the number of receptor locations, these locations are labeled as "Risk Not Assessed," even though they will be modeled. MFA has reviewed receptor locations near the facility where it is expected that the maximally exposed receptors will be located. Receptors farther from the facility (outside of the 25-meter and 50-meter tires) located in roadways or rail rights-of-way will be assessed using the nearest zoning designation as receptors at these distances are more representative of the general area.

As identified in subsection 3.7, there are several receptors that are located at the Mari-Linn School to the northwest of the facility. These receptors will be evaluated for both child and worker exposure. MFA will use the worst case between the two exposure scenarios to classify chronic cancer and noncancer at this location.

Figure 4-1 presents the existing land-use zoning identified for the modeling domain, and Figure 4-2 is provided for the area immediately surrounding the facility. Figures 4-3 and 4-4 present the corresponding exposure location categorization for the modeling domain and the immediate area surrounding the facility, respectively. For additional clarification, Table 3-9 shows all proposed receptor coordinates and their exposure classifications.

4.2.2 Exposure Pathways

MFA assumes that predicted cancer and noncancer risk (i.e., chronic and acute hazard index) resulting from facility TEUs will not have additional exposure pathways (i.e., ingestion or injection) other than those already accounted for in each published RBC. Moreover, based on a review of land-use zoning classifications and aerial imagery, there are no known locations that might present additional exposure pathways that require further analysis. Since no additional exposure pathways have been observed, a Level 4 Risk Assessment is not being proposed at this time.

4.2.3 Risk-Based Concentrations

Excess cancer risk and chronic and acute noncancer risk will be assessed using the most current RBCs available as shown in OAR 340 245 8010 Table 2. The TACs from the DEQ-approved emissions inventory and corresponding RBCs to be included in the Level 3 Risk Assessment are presented in Table 4-1.

4.3 Risk Estimates

As single dispersion model will be executed using a unit emission rate of 1 g/s for each TEU for annual (chronic cancer and noncancer) assessments. For the 24-hour (acute) assessment, MFA developed risk equivalent emission rates for each non-exempt TEU, as shown in Table 2-3.

4.3.1 Example Calculation—Level 3 Risk Assessment

Example calculations for estimating excess cancer risk and chronic noncancer hazard index for a single proposed exposure location are presented in Equation 1 and Equation 2 per OAR 340-245-0210(2)(c).

Equation 1.

$$\text{Excess Cancer Risk (chances-in-a-million)} = \sum \frac{(\text{TAC annual emission rate [g/s]}) \times \left(\text{modeled TEU dispersion factor } \left[\frac{\mu g/m^3}{g/s}\right]\right)}{(\text{applicable RBC at exposure location [ug/m}^3\text{]})}$$

Equation 2.

$$\text{Chronic Noncancer Hazard Index} = \sum \frac{(\text{TAC annual emission rate [g/s]}) \times \left(\text{modeled TEU dispersion factor } \left[\frac{\mu g/m^3}{g/s}\right]\right)}{(\text{applicable RBC at exposure location [ug/m}^3\text{]})}$$

The total facility excess cancer risk and chronic noncancer hazard index will be derived by summing each individual TAC risk contribution at each proposed exposure location.

For the 24-hour (acute) assessment, MFA developed risk equivalent emission rates for each TEU. The proposed risk equivalent emission rates were calculated by dividing the individual TAC emission rate for each TEU by their respective acute RBC. The resulting value for each TAC was then summed together to create a total risk equivalent emission rate for the TEU. This process was repeated for each TEU at the facility. The risk equivalent emission rates will be modeled for the 24-hour averaging

period to assess the cumulative acute risk from the facility. The proposed risk equivalent emission rates are provided in Table 2-3.

4.4 Uncertainty Analysis

Although the proposed Level 3 Risk Assessment will be conducted using the most accurate and current information, there are various levels of uncertainty associated with the proposed risk assessment. Per OAR 340 245 0210(2)(d), known quantitative and qualitative uncertainties with the proposed Level 3 Risk Assessment include, but may not be limited to, the following:

Acute Assessments:

- To assess acute noncancer risk, the full 24-hour exposure duration was assumed. While it is unlikely a person would be at most of the exposure locations for 24 consecutive hours, this method provides a worst-case potential exposure duration for an individual at these locations. For example, if an employee at an identified acute exposure location only works a single, eight-hour shift, the exposure would only be a third of what is being assumed in the Level 3 Risk Assessment. **Hence, the Level 3 Risk Assessment may overestimate acute noncancer risk due to the 24-hour exposure duration assumption for chemicals with RBCs based on Toxicity Reference Values with an exposure period of 24-hours or more. Conversely, the Level 3 Risk Assessment may underestimate acute noncancer risk for Toxicity Reference Values with an exposure period of less than 24 hours because the model is executed for the 24-hour averaging period.**
- The Level 3 Risk Assessment was conducted assuming each TEU at the facility is operating at maximum potential to emit, simultaneously. For example, the steaming tunnels and dryers typically do not need to operate at the maximum potential to emit to satisfy the operating requirements of the facility. It is highly unlikely that all TEUs at the facility will operate at their maximum potential to emit for a 24-hour period simultaneously. **Therefore, the Level 3 Risk Assessment likely overestimates acute noncancer risk due to unrealistic operating conditions.**
- The Level 3 Risk Assessment relies on modeling using a two-year period of hourly meteorological data. Some meteorological conditions, which may only occur a few days or less in a two-year period, result in worst-case dispersion characteristics. It is extremely unlikely that these infrequent meteorological conditions would occur at the same time that the facility is simultaneously operating all TEUs at maximum potential to emit. **Therefore, the Level 3 Risk Assessment likely overestimates acute noncancer risk because of the improbability of facility operations at maximum potential to emit aligning with worst-case meteorological conditions.**

Cancer and Chronic Noncancer Assessments:

- The RBCs developed by the DEQ for excess cancer risk and chronic noncancer risk assume a 70-year exposure duration for 24 hours per day. It is unlikely that a person would remain at the same residence or in areas potentially impacted by emissions covered by the CAO program for 70 consecutive years for 24 hours per day. The risk assessments also account for a person being exposed to the local facility emission rate for the entire exposure duration (i.e., 70 years). **Therefore, the Level 3 Risk Assessment will overestimate cancer and chronic noncancer risk due to the unrealistic exposure duration assumption.**

All Assessments:

- Only excess cancer risk and chronic and acute noncancer hazard index from TACs that have RBCs published by the DEQ will be assessed. Table 4-2 presents a list of the TACs emitted from the facility TEUs that do not have RBCs published by the DEQ. **As a result, the Level 3 Risk**

Assessment does not assess cancer and/or noncancer risk associated with those TACs that do not yet have an associated RBC. However, the development of RBCs generally has a level of conservatism that may overestimate cancer and/or noncancer risk from TACs with known RBCs.

5 Closing

MFA looks forward to working with the DEQ throughout the CAO permit application process. If there are any questions or comments regarding this document, please contact Andrew Rogers at (503) 407-6406.

References

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EPA. 1995. User's Guide for the Industrial Source Complex Dispersion Models—Volume II—Description of Model Algorithms. EPA-454/B-95-003b. U.S. Environmental Protection Agency Office of Air Quality Planning and Standards. Research Triangle Park, NC. September.

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Limitations

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Figures

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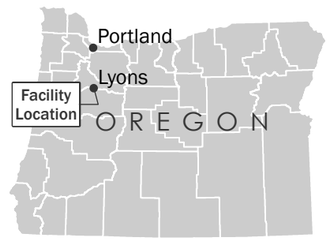
Figure 1-1
Aerial Image of the Facility Location

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358

Legend

- Meteorological Station
- Property Boundary
- City Limits
- Urban Growth Boundary
- UTM Grid Guideline

Key Map



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Meters

Data Sources
Aerial photograph obtained from Google.

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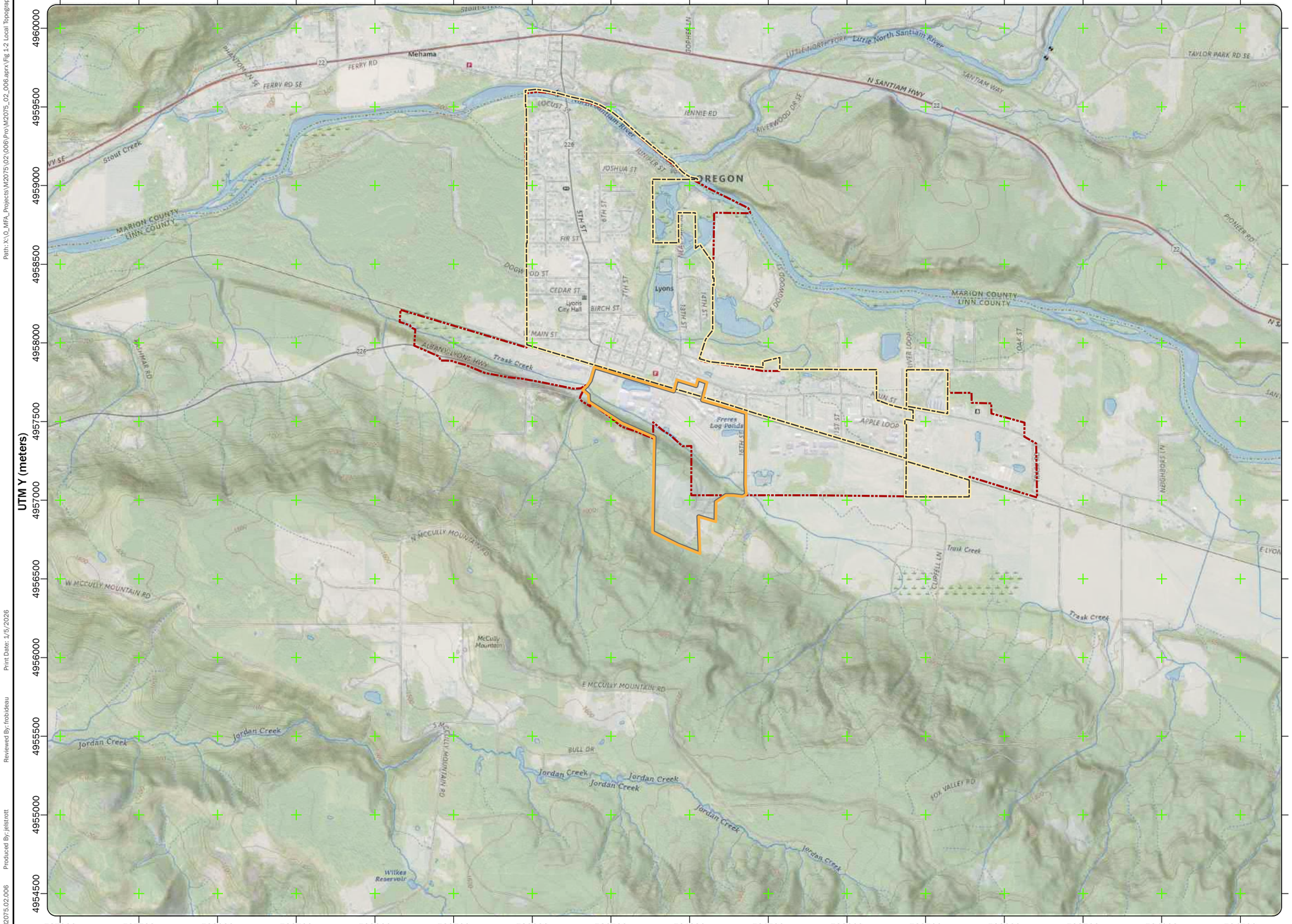
Path: X:\0_MFA_Projects\M2075\02\006\Pro\M2075_02_006.aprx\Fig 1-1 Aerial Image
Print Date: 1/5/2026
Reviewed By: frobideau
Produced By: jelstrott
Project: M2075.02.006

Figure 1-2
Local Topography

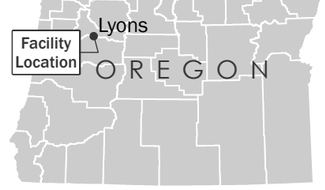
Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358



Legend

- Property Boundary
- Lyons City Limits
- Lyons Urban Growth Boundary
- UTM Grid Guideline

Key Map



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Data Sources
Topography obtained from Google.

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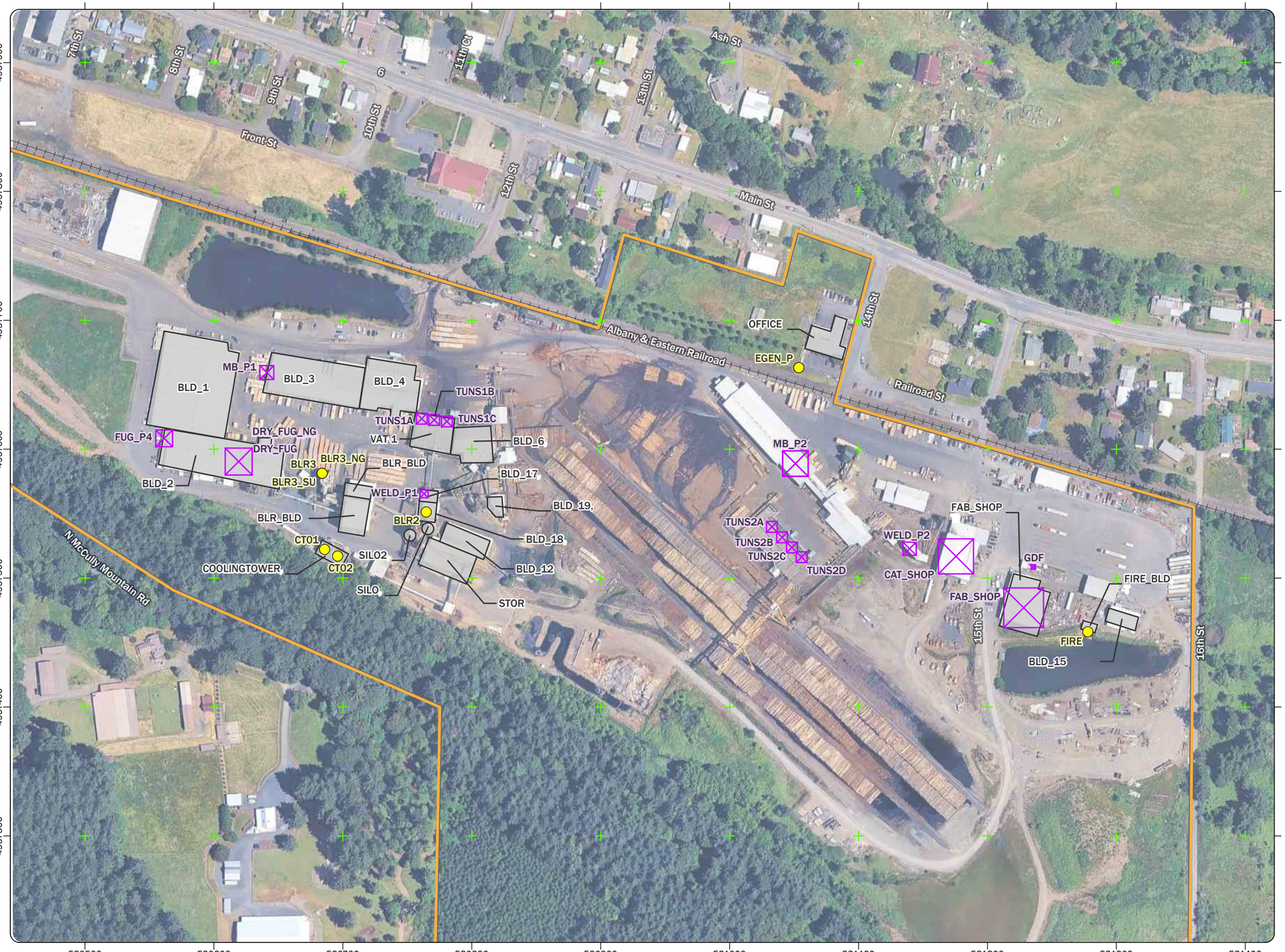
Print Date: 1/5/2026
Reviewed By: frobideau
Produced By: jelstrott
Project: M2075.02.006

Figure 2-1
Proposed Downwash Structures and Toxic Emission Unit Locations

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358



UTM Y (meters): 4957900, 4957800, 4957700, 4957600, 4957500, 4957400, 4957300

UTM X (meters): 530500, 530600, 530700, 530800, 530900, 531000, 531100, 531200, 531300, 531400

Legend

- Modeled Point Source Location
- Modeled Volume Source Location
- Downwash Structure
- Property Boundary
- Railroad
- UTM Grid Guideline

Key Map

0 100
Meters

Data Sources
Aerial photograph obtained from Google.

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Path: X:\O_MFA_Projects\M2075\02\006\Pro\M2075_02_006.aprx\Fig 2-1 Proposed Downwash Structures and Toxic Emission Unit Locations
Print Date: 1/5/2026
Reviewed By: frobideau
Produced By: jelstrott
Project: M2075.02.006

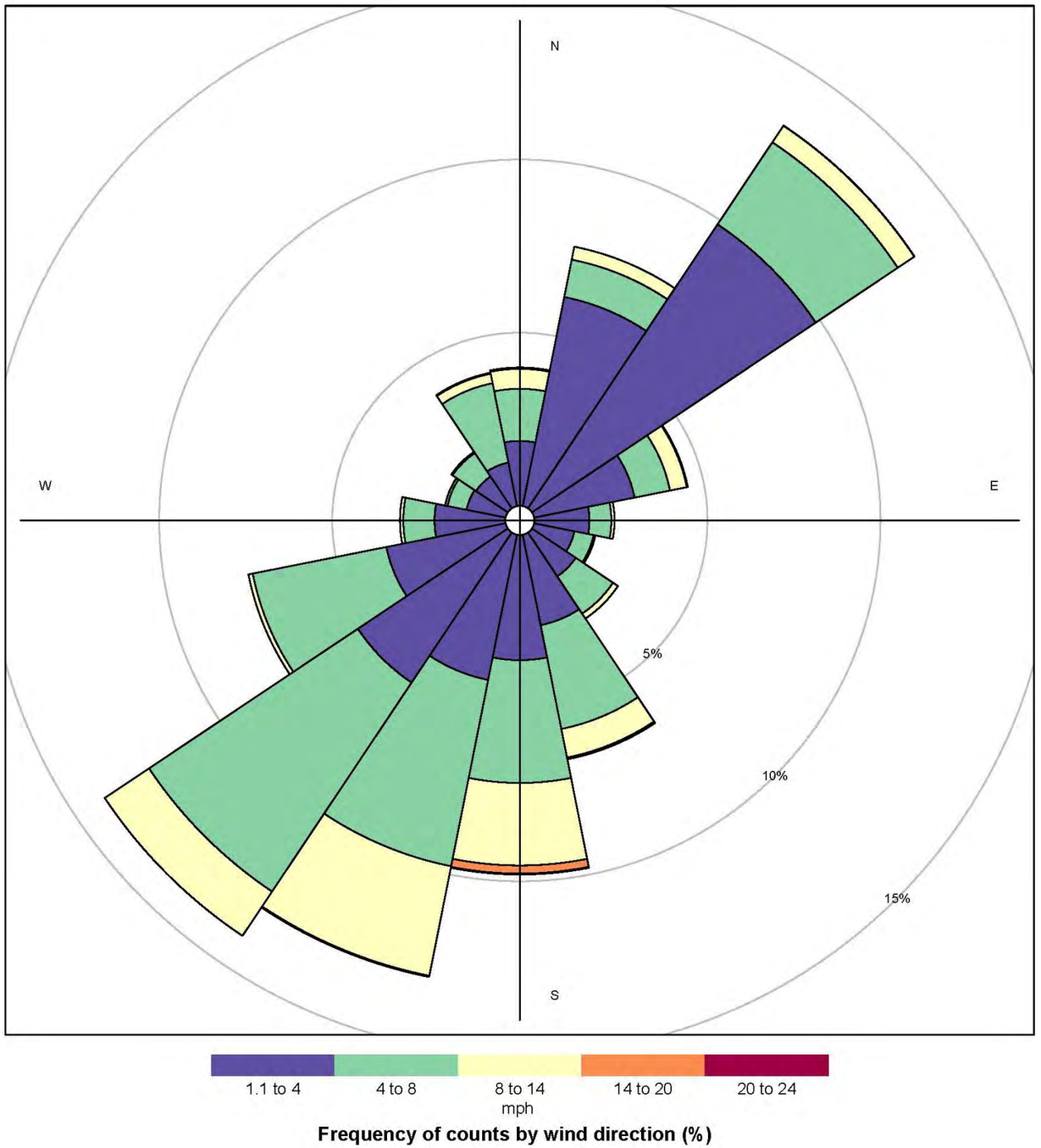

Figure 3-1
Wind Rose
(Lyons East Station)

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358

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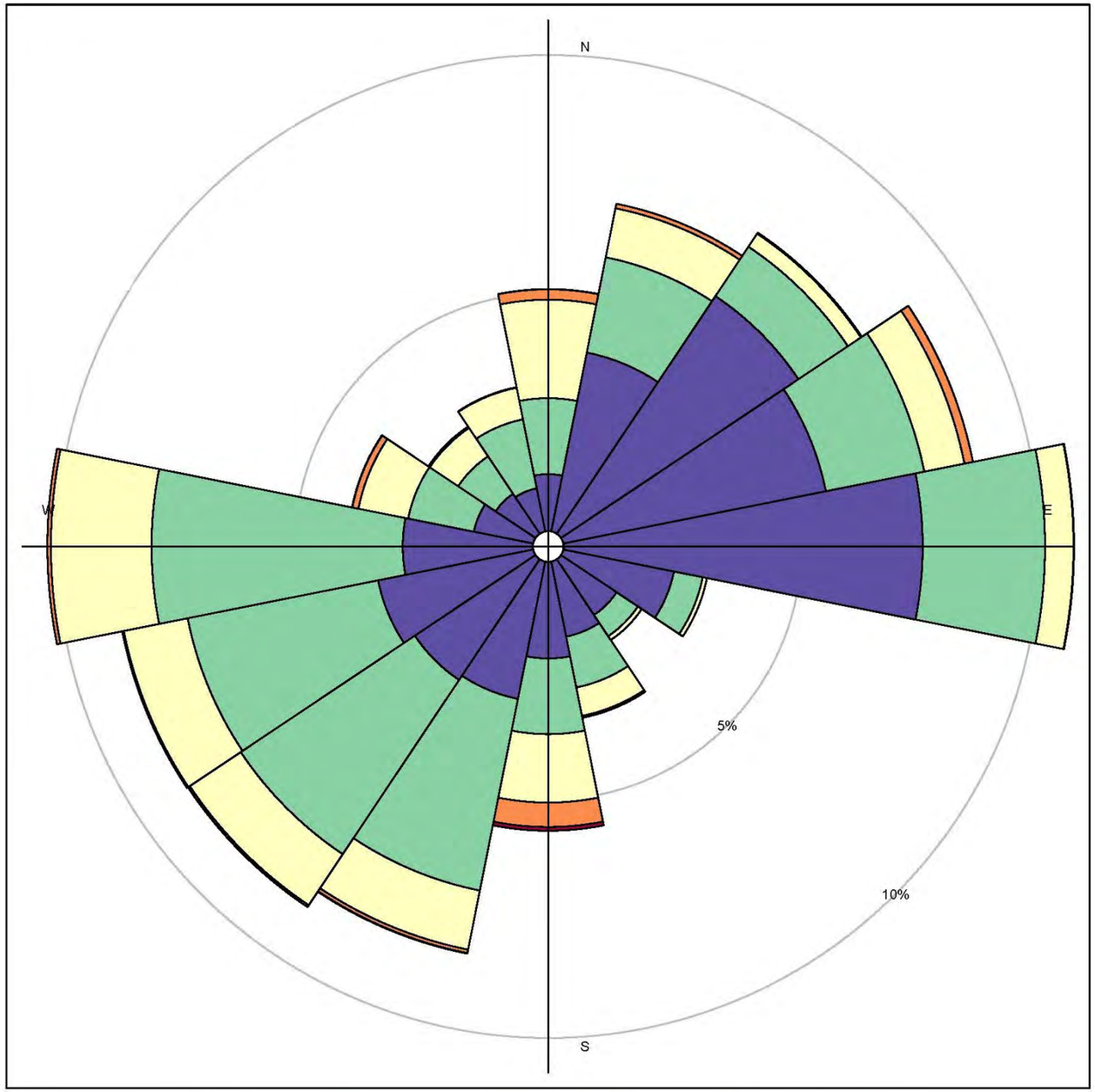

Figure 3-2
Wind Rose
(Mill City Station)

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358

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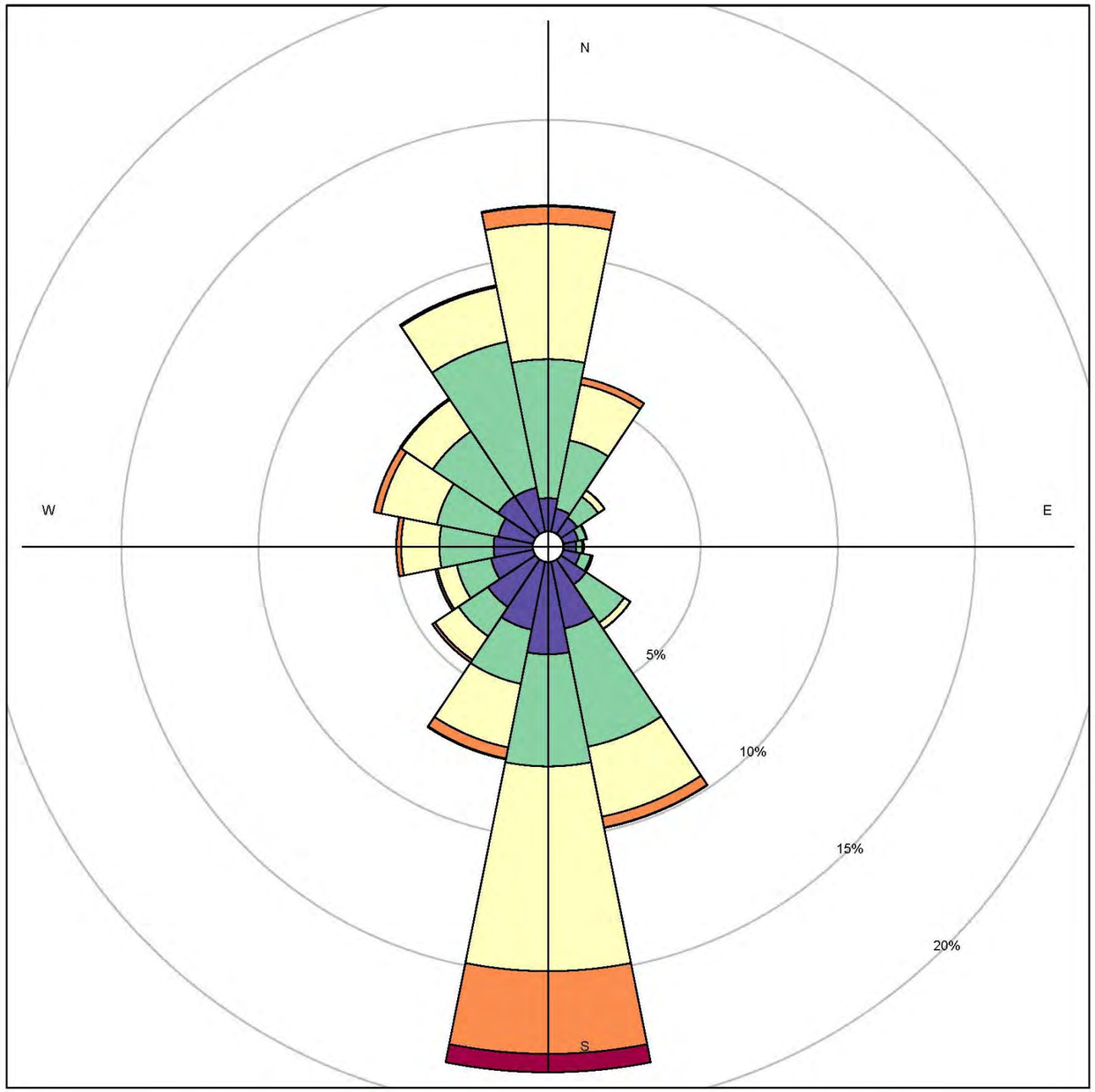

Figure 3-3
Wind Rose (Salem McNary Station Only)

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358

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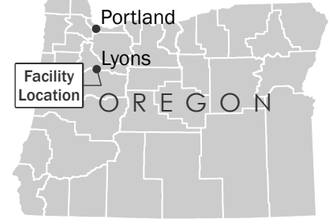
Figure 3-4
Proposed Receptor Locations

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358

Legend

- Modeled Receptor Location
- Property Boundary
- UTM Grid Guideline

Key Map



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Data Sources
Aerial photograph obtained from Google.

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Sublimity
Stayton
Lyons
Gates
Mill City
214
22
226
Albany & Eastern Railroad
North Santiam River
Little North Santiam River
Thomas Creek

UTM Y (meters)
4966000
4964000
4962000
4960000
4958000
4956000
4954000
4952000
4950000
4948000
4946000

UTM X (meters)
516000
518000
520000
522000
524000
526000
528000
530000
532000
534000
536000
538000
540000
542000
544000

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Produced By: jelstrott
Project: M2075.02.006

Figure 3-5
Proposed Receptor Locations in the Immediate Area

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358

Legend

- Modeled Receptor Location
- Property Boundary
- UTM Grid Guideline

Key Map

0 200
Meters

Data Sources
Aerial photograph obtained from Google.

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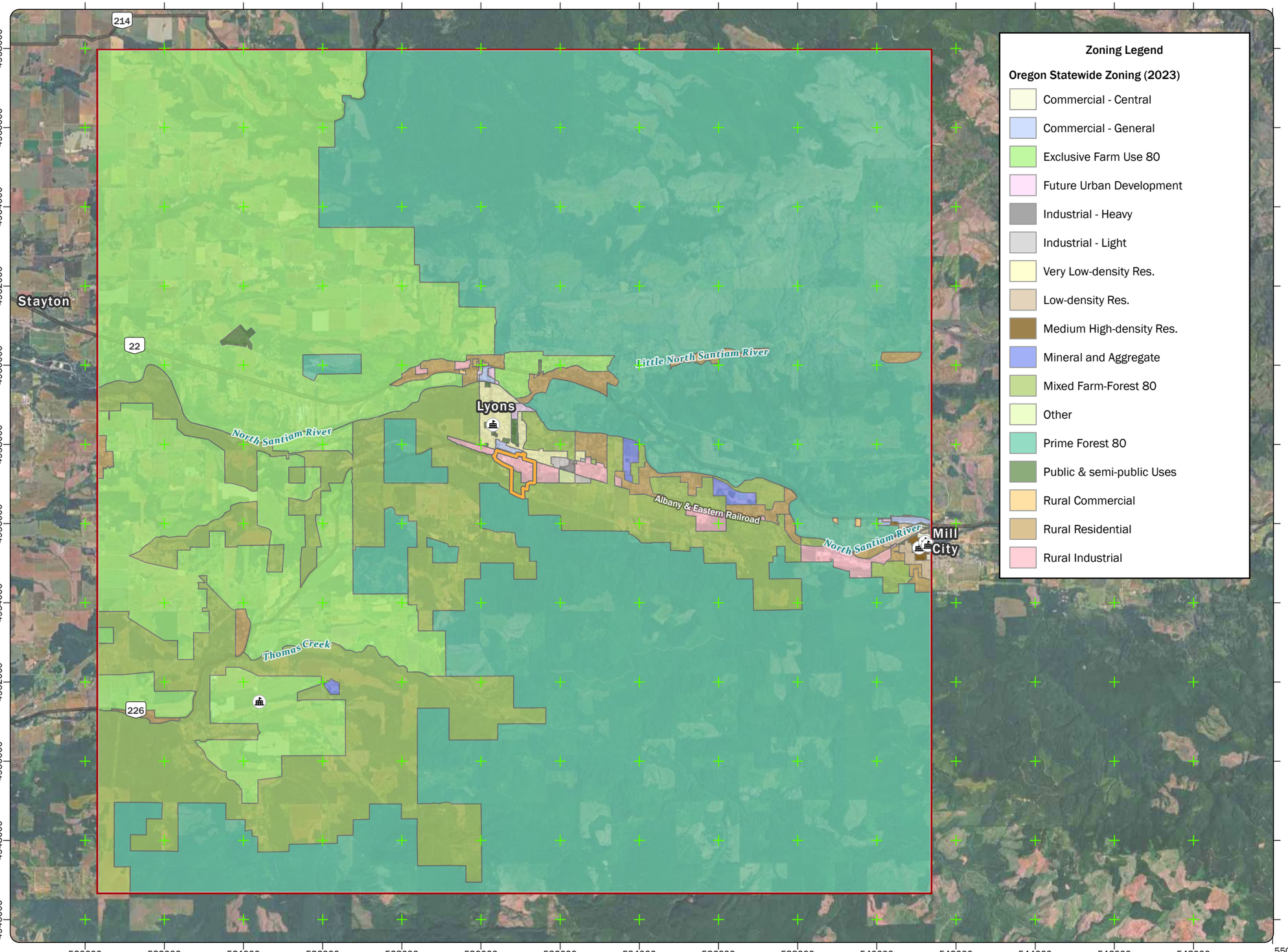
Produced By: jelstrott
Project: M2075.02.006

Figure 4-1
Existing Land-Use Zoning Classifications

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358



Zoning Legend

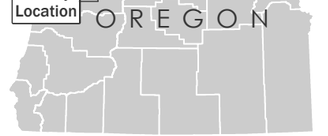
Oregon Statewide Zoning (2023)

- Commercial - Central
- Commercial - General
- Exclusive Farm Use 80
- Future Urban Development
- Industrial - Heavy
- Industrial - Light
- Very Low-density Res.
- Low-density Res.
- Medium High-density Res.
- Mineral and Aggregate
- Mixed Farm-Forest 80
- Other
- Prime Forest 80
- Public & semi-public Uses
- Rural Commercial
- Rural Residential
- Rural Industrial

Legend

- School Location (2015-16)
- Exposure Assessment Boundary
- Proposed Modeling Domain Extent
- UTM Grid Guideline

Key Map



Notes

There are no registered early learning providers within the proposed modeling domain extent.

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Meters

Data Sources

Zoning from the Oregon Department of Land Conservation and Development (2023); school locations from Oregon Health Authority; early learning providers from Oregon Department of Education; aerial photograph obtained from Google.

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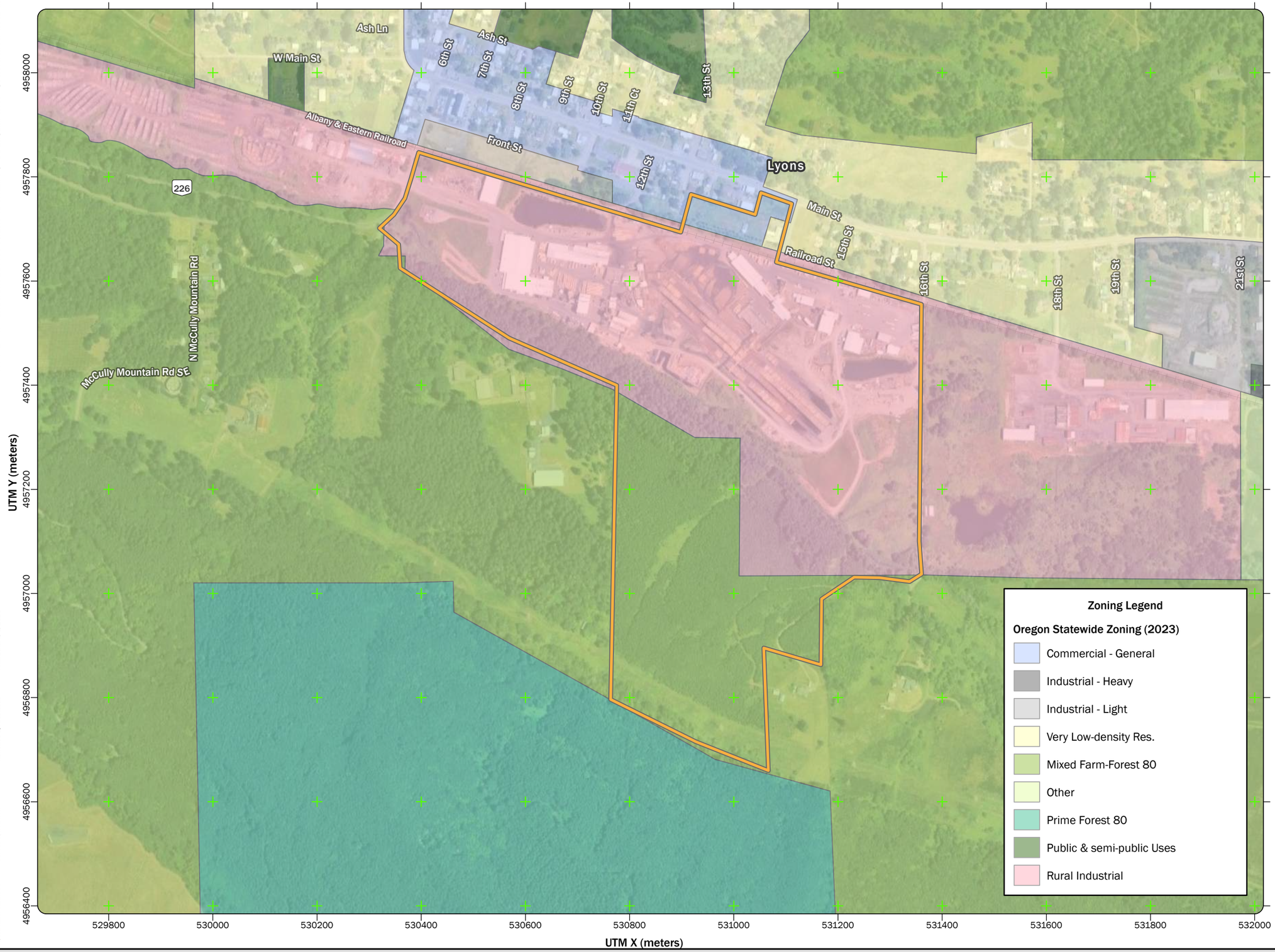
Print Date: 1/5/2026
Reviewed By: frobideau
Produced By: jelstrott
Project: M2075.02.006

Figure 4-2
Existing Land-Use Zoning Classifications in the Immediate Area

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358



Legend

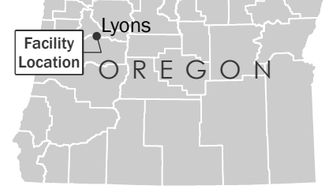
- Exposure Assessment Boundary
- UTM Grid Guideline

Zoning Legend

Oregon Statewide Zoning (2023)

- Commercial - General
- Industrial - Heavy
- Industrial - Light
- Very Low-density Res.
- Mixed Farm-Forest 80
- Other
- Prime Forest 80
- Public & semi-public Uses
- Rural Industrial

Key Map



Notes

There are no schools or registered early learning providers within the proposed modeling domain extent.

0 200
Meters

Data Sources

Zoning from the Oregon Department of Land Conservation and Development (2023); school locations from Oregon Health Authority; early learning providers from Oregon Department of Education; aerial photograph obtained from Google.

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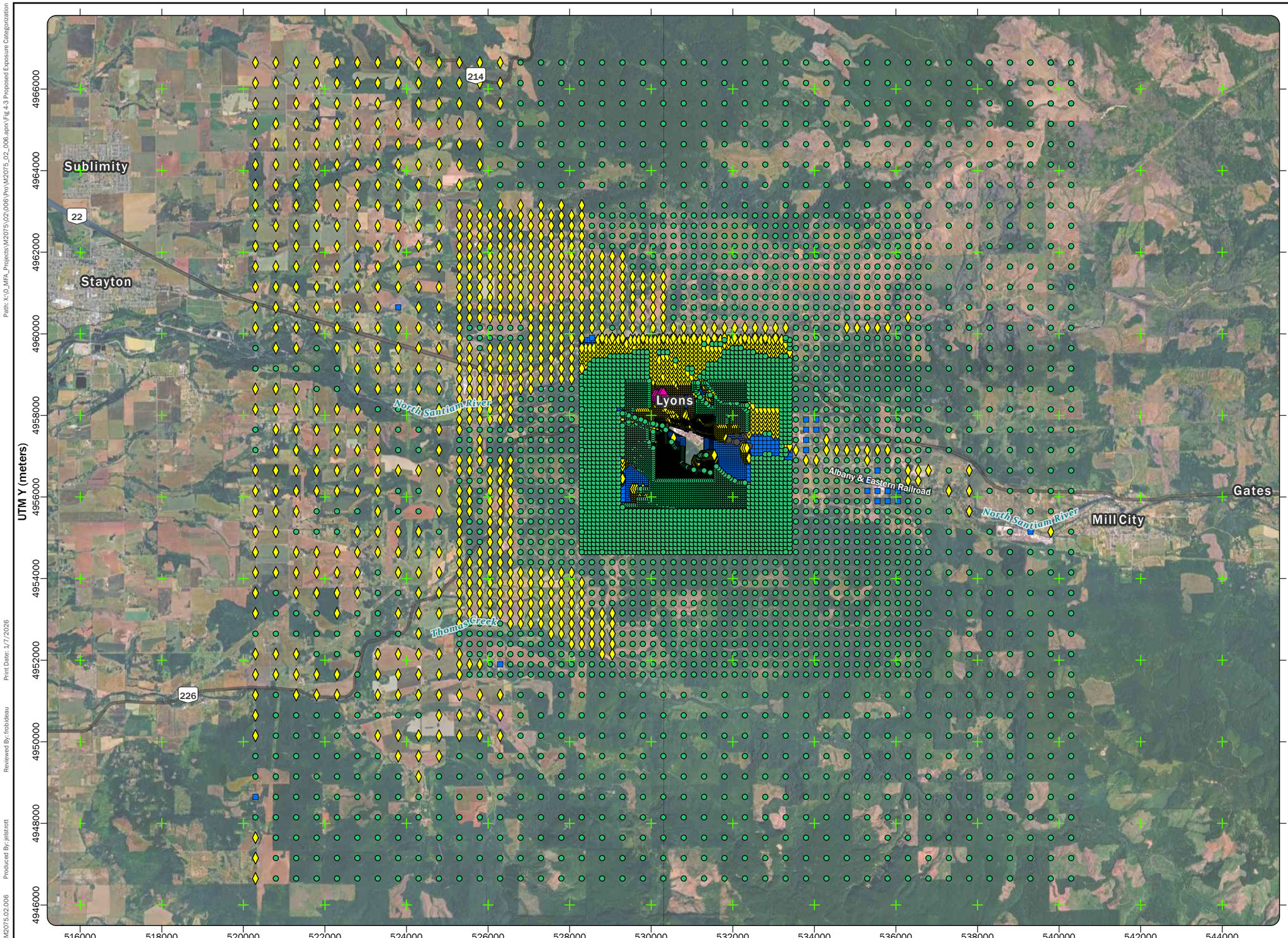
Path: X:\0_MFA_Projects\M2075\02\006\Pro\M2075_02_006.aprx\Fig 4-2 Existing Land-Use Zoning Classifications Immediate Area
Print Date: 1/5/2026
Reviewed By: frobideau
Produced By: jelstrott
Project: M2075.02.006

Figure 4-3
Proposed Exposure Categorization

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358



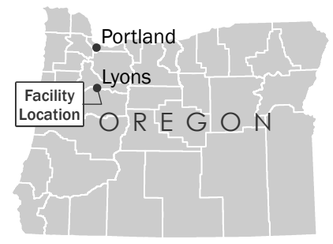
Legend

Receptors

Proposed Risk-Based Concentration

- Child
- Residential
- Worker
- Acute Only
- Risk Not Assessed
- Exposure Assessment Boundary
- UTM Grid Guideline

Key Map



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Data Sources
Aerial photograph obtained from Google.

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Print Date: 1/7/2026
Reviewed By: frobideau
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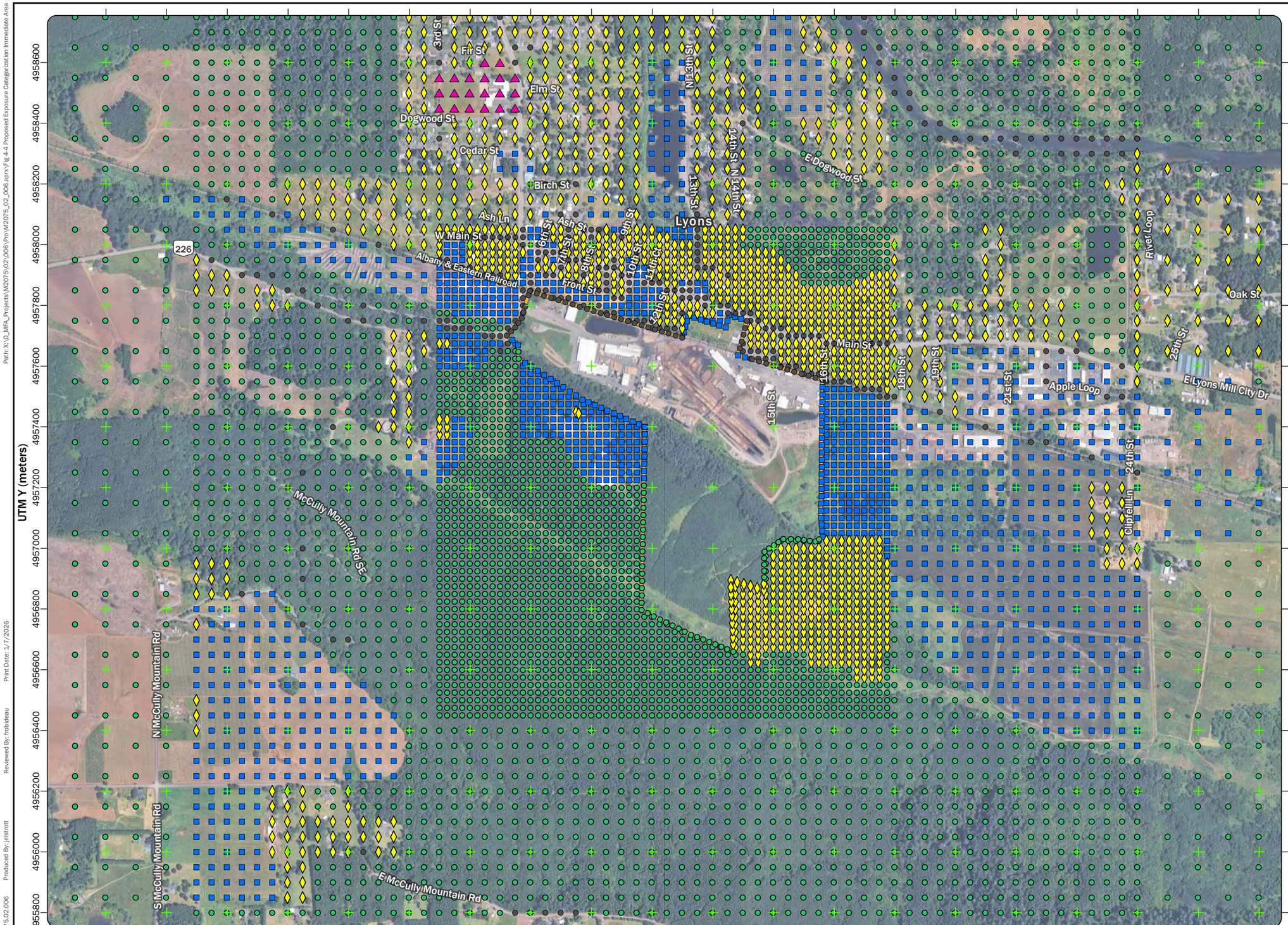
Project: M2075.02.006

Figure 4-4
Proposed Exposure Categorization in the Immediate Area

Freres Lumber Co., Inc.
Manufacturing Complex
141 14th Street, Lyons
Oregon 97358



Legend

Receptors

Proposed Risk-Based Concentration

- Child/worker
- Residential
- Worker
- Acute Only
- Risk Not Assessed
- Exposure Assessment Boundary
- UTM Grid Guideline

Key Map

0 400
Meters

Data Sources
Aerial photograph obtained from Google.

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Path: X:\0_MFA_Projects\M2075\02\006\Pro\M2075_02_006.aprx\Fig 4-4 Proposed Exposure Categorization Immediate Area
Print Date: 1/7/2026
Reviewed By: frobideau
Produced By: jelstrott
Project: M2075.02.006

Tables

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Table 2-1
Proposed Annual TAC Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Significant TEUs [1]																	
			Wood Fuel Combustion in Boiler 3	Veneer Dryer 1 Heated Zones	Veneer Dryer 2 Heated Zones	Total Emissions Through Boiler 3 Exhaust		Wood Fuel Combustion in Boiler 3 During Startup		Cooling Tower Cell 1		Cooling Tower Cell 2		Emergency Diesel Generator Fire Pump		Gasoline Dispensing Facility		Veneer Dryer Fugitives	
TEU ID			BLR3	VD1_HEAT	VD2_HEAT			BLR3_SU		CT01		CT02		FIRE		GDF		DRY_FUG	
Dispersion Model ID			--			BLR3		BLR3_SU		CT01		CT02		FIRE		GDF		DRY_FUG	
Emission Rate Units			(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]
METALS																			
Antimony and Compounds	7440-36-0	Yes	0.43	--	--	0.43	6.2E-06	0.012	1.8E-07	--	--	--	--	3.3E-04	4.8E-09	--	--	--	--
Aluminum and Compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum Oxide	1344-28-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and Compounds	7440-38-2	Yes	2.68	--	--	2.68	3.9E-05	0.034	4.9E-07	--	--	--	--	1.7E-03	2.4E-08	--	--	--	--
Barium and Compounds	7440-39-3	No	297	--	--	297	4.3E-03	19.1	2.8E-04	--	--	--	--	3.9E-04	5.6E-09	--	--	--	--
Beryllium and Compounds	7440-41-7	Yes	0.040	--	--	0.040	5.8E-07	5.3E-04	7.7E-09	--	--	--	--	5.0E-06	7.2E-11	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	0.46	--	--	0.46	6.6E-06	0.020	2.8E-07	--	--	--	--	1.6E-03	2.3E-08	--	--	--	--
Chromium VI	18540-29-9	Yes	0.39	--	--	0.39	5.6E-06	0.028	4.0E-07	--	--	--	--	1.1E-04	1.5E-09	--	--	--	--
Cobalt and Compounds	7440-48-4	Yes	0.71	--	--	0.71	1.0E-05	6.6E-03	9.5E-08	--	--	--	--	1.7E-05	2.4E-10	--	--	--	--
Copper and Compounds	7440-50-8	Yes	5.38	--	--	5.38	7.7E-05	0.33	4.7E-06	--	--	--	--	4.3E-03	6.2E-08	--	--	--	--
Lead and Compounds	7439-92-1	Yes	7.39	--	--	7.39	1.1E-04	0.12	1.8E-06	--	--	--	--	8.7E-03	1.3E-07	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	136	--	--	136	2.0E-03	7.33	1.1E-04	--	--	--	--	3.3E-03	4.7E-08	--	--	--	--
Mercury and Compounds	7439-97-6	Yes	1.50	--	--	1.50	2.2E-05	7.0E-03	1.0E-07	--	--	--	--	2.1E-03	3.0E-08	--	--	--	--
Molybdenum trioxide	1313-27-5	No	4.41	--	--	4.41	6.3E-05	0.012	1.8E-07	--	--	--	--	--	--	--	--	--	--
Nickel	365	Yes	3.97	--	--	3.97	5.7E-05	0.052	7.5E-07	--	--	--	--	4.1E-03	5.9E-08	--	--	--	--
Phosphorus and Compounds	504	No	440	--	--	440	6.3E-03	21.6	3.1E-04	--	--	--	--	8.8E-03	1.3E-07	--	--	--	--
Selenium and Compounds	7782-49-2	Yes	2.30	--	--	2.30	3.3E-05	2.9E-03	4.1E-08	--	--	--	--	2.3E-03	3.3E-08	--	--	--	--
Silver and Compounds	7440-22-4	No	1.40	--	--	1.40	2.0E-05	3.71	5.3E-05	--	--	--	--	5.0E-05	7.3E-10	--	--	--	--
Thallium and Compounds	7440-28-0	No	2.63	--	--	2.63	3.8E-05	7.3E-03	1.1E-07	--	--	--	--	2.5E-04	3.6E-09	--	--	--	--
Total Chromium	7440-47-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.84	--	--	0.84	1.2E-05	3.9E-03	5.6E-08	--	--	--	--	--	--	--	--	--	--
Zinc and Compounds	7440-66-6	No	81.7	--	--	81.7	1.2E-03	2.25	3.2E-05	--	--	--	--	5.5E-03	7.9E-08	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS																			
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	82.0	--	--	82.0	1.2E-03	0.23	3.3E-06	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	0.076	1.1E-06	--	--
1,2,4-Trimethylbenzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	6.1E-06	--	--
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	2.4E-06	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	23.8	--	--	23.8	3.4E-04	0.067	9.6E-07	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	0.23	3.3E-06	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	16.5	2.4E-04	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	9.89	--	--	9.89	1.4E-04	0.028	4.0E-07	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	402	170	170	742	0.011	1.12	1.6E-05	--	--	--	--	0.82	1.2E-05	--	--	68.0	9.8E-04
Acetone	67-64-1	Yes	751	130	130	1,011	0.015	2.09	3.0E-05	--	--	--	--	--	--	--	--	52.0	7.5E-04
Acetophenone	98-86-2	No	2.61	--	--	2.61	3.8E-05	7.3E-03	1.0E-07	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	369	13.0	13.0	395	5.7E-03	1.03	1.5E-05	--	--	--	--	0.036	5.1E-07	--	--	5.20	7.5E-05
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	0.84	1.2E-05	--	--	--	--
Benzene	71-43-2	Yes	1,391	5.90	5.90	1,402	0.020	3.88	5.6E-05	--	--	--	--	0.20	2.8E-06	5.88	8.5E-05	2.36	3.4E-05
Bromomethane (Methyl bromide)	74-83-9	Yes	16.0	--	--	16.0	2.3E-04	0.045	6.4E-07	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	14.0	--	--	14.0	2.0E-04	0.039	5.6E-07	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	1,121	--	--	1,121	0.016	3.13	4.5E-05	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	23.6	--	--	23.6	3.4E-04	0.066	9.5E-07	--	--	--	--	2.1E-04	3.0E-09	--	--	--	--
Chloroform	67-66-3	Yes	28.5	--	--	28.5	4.1E-04	0.080	1.1E-06	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	61.7	--	--	61.7	8.9E-04	0.17	2.5E-06	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	63.6	--	--	63.6	9.1E-04	0.18	2.6E-06	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	4.85	7.0E-05	--	--
Dibutyl phthalate	84-74-2	No	47.3	--	--	47.3	6.8E-04	0.13	1.9E-06	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	565	--	--	565	8.1E-03	1.58	2.3E-05	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	61.9	--	--	61.9	8.9E-04	0.17	2.5E-06	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	17.3	--	--	17.3	2.5E-04	0.048	6.9E-07	--	--	--	--	0.011	1.6E-07	1.51	2.2E-05	--	--
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	-23-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	1,490	140	140	1,770	0.025	4.16	6.0E-05	--	--	--	--	1.81	2.6E-05	--	--	56.0	8.1E-04
Hexane	110-54-3	Yes	409	--	--	409	5.9E-03	1.14	1.6E-05	--	--	--	--	0.028	4.1E-07	23.2	3.3E-04	--	--
Hydrochloric Acid	7647-01-0	Yes	6,187	--	--	6,187	0.089	17.3	2.5E-04	--	--	--	--	0.20	2.8E-06	--	--	--	--
Hydrogen Fluoride	7664-39-3	Yes	128	--	--	128	1.8E-03	0.36	5.2E-06	--	--	--	--	--	--	--	--	--	--
Isoprene	78-79-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29	4.1E-06	--	--
Isopropyl Alcohol	67-63-0	Yes	6,414	--	--	6,414	0.092	17.9	2.6E-04	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	1,039	390	390	1,819	0.026	2.90	4.2E-05	--	--	--	--	--	--	--	--	156	2.2E-03
Methyl Isobutyl Ketone	108-10-1	Yes	631	15.0	15.0	661	9.5E-03	1.76	2.5E-05	--	--	--	--	--	--	--	--	6.00	8.6E-05
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	2.86	4.1E-05	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	1.34	1.9E-05	--	--
Phenol	108-95-2	Yes	227	34.0	34.0	295	4.2E-03	0.63	9.1E-06	--	--	--	--	--	--	--	--	13.6	2.0E-04
Propionaldehyde	123-38-6	Yes	441	24.0	24.0	489	7.0E-03	1.23	1.8E-05	--	--	--	--	--	--	--	--	9.60	1.4E-04
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	0.49	7.1E-06	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	1.25	1.8E-05	--	--
Silicon dioxide (amorphous)	7631-86-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium Hydroxide	1310-73-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	666	--	--	666	9.6E-03	1.86	2.7E-05	--	--	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	--	--	--	--	--	--	--	3.80	5.5E-05	3.80	5.5E-05	--	--	--	--	--	--
Toluene	108-88-3	Yes	16.2	11.0	11.0	38.2	5.5E-04	0.045	6.5E-07	--	--	--	--	0.11	1.6E-06	14.4	2.1E-04	4.40	6.3E-05
Trimethylbenzene	25551-13-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium Pentoxide	1314-62-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	7.41	7.50	7.50	22.4	3.2E-04	0.021	3.0E-07	--	--	--	--	0.045	6.4E-07	--	--	3.00	4.3E-05
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)																			
PAHs (excluding Naphthalene)	401	Yes	--	--	--	--	--	--	--	--	--	--	--	0.038	5.5E-07	--	--	--	--
2-Methyl naphthalene	91-57-6	No	1.99	--	--	1.99	2.9E-05	5.5E-03	8.0E-08	--	--	--	--	--	--	2.0E-03	2.8E-08	--	--
Acenaphthene	83-32-9	No	1.21	--	--	1.21	1.7E-05	3.4E-03	4.9E-08	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	6.66	--	--	6.66	9.6E-05	0.019	2.7E-07	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	3.80	--	--	3.80	5.5E-05	0.011	1.5E-07	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	3.15	--	--	3.15	4.5E-05	8.8E-03	1.3E-07	--	--	--	--	3.7E-05	5.3E-10	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	0.12	--	--	0.12	1.7E-06	3.2E-04	4.6E-09	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	0.20	--	--	0.20	2.9E-06	5.6E-04	8.1E-09	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	0.30	--	--	0.30	4.3E-06	8.4E-04	1.2E-08	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	0.21	--	--	0.21	3.1E-06	6.0E-04	8.6E-09	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	0.22	--	--	0.22	3.2E-06	6.2E-04	8.9E-09	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	0.074	--	--	0.074	1.1E-06	2.1E-04	3.0E-09	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	0.11	--	--	0.11	1.6E-06	3.1E-04	4.5E-09	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	2.37	--	--	2.37	3.4E-05	6.6E-03	9.5E-08	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	4.27	--	--	4.27	6.1E-05	0.012	1.7E-07	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	0.14	--	--	0.14	2.1E-06	4.0E-04	5.8E-09	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	141	--	--	141	2.0E-03	0.39	5.7E-06	--	--	--	--	0.021	3.0E-07	6.4E-03	9.2E-08	--	--
Perylene	198-55-0	No	0.045	--	--	0.045	6.5E-07	1.3E-04	1.8E-09	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	9.17	--	--	9.17	1.3E-04	0.026	3.7E-07	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	5.02	--	--	5.02	7.2E-05	0.014	2.0E-07	--	--	--	--	--	--	--	--	--	--
DIOXINS AND FURANS																			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	1.4E-06	--	--	1.4E-06	1.9E-11	3.8E-09	5.4E-14	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	1.9E-06	--	--	1.9E-06	2.7E-11	5.3E-09	7.6E-14	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	1.2E-06	--	--	1.2E-06	1.8E-11	3.4E-09	5.0E-14	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	3.0E-06	--	--	3.0E-06	4.3E-11	8.3E-09	1.2E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	3.1E-06	--	--	3.1E-06	4.5E-11	8.8E-09	1.3E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	1.4E-05	--	--	1.4E-05	2.0E-10	3.9E-08	5.6E-13	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	3.5E-05	--	--	3.5E-05	5.0E-10	9.7E-08	1.4E-12	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	Yes	1.1E-05	--	--	1.1E-05	1.6E-10	3.2E-08	4.6E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	5.7E-06	--	--	5.7E-06	8.1E-11	1.6E-08	2.3E-13	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	8.6E-06	--	--	8.6E-06	1.2E-10	2.4E-08	3.5E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	5.1E-06	--	--	5.1E-06	7.3E-11	1.4E-08	2.0E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	4.5E-06	--	--	4.5E-06	6.4E-11	1.3E-08	1.8E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	9.5E-07	--	--	9.5E-07	1.4E-11	2.6E-09	3.8E-14	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	3.8E-06	--	--	3.8E-06	5.4E-11	1.1E-08	1.5E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	8.1E-06	--	--	8.1E-06	1.2E-10	2.3E-08	3.3E-13	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	1.1E-06	--	--	1.1E-06	1.6E-11	3.2E-09	4.5E-14	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	7.1E-06	--	--	7.1E-06	1.0E-10	2.0E-08	2.8E-13	--	--	--	--	--	--	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)																			
Polychlorinated Biphenyls	1336-36-3	Yes	0.011	--	--	0.011	1.6E-07	3.1E-05	4.5E-10	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	0.37	--	--	0.37	5.3E-06	1.0E-03	1.5E-08	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	Yes	0.012	--	--	0.012	1.8E-07	3.4E-05	4.9E-10	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	6.5E-03	--	--	6.5E-03	9.3E-08	1.8E-05	2.6E-10	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	1.34	--	--	1.34	1.9E-05	3.7E-03	5.4E-08	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	2.98	--	--	2.98	4.3E-05	8.3E-03	1.2E-07	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	0.066	--	--	0.066	9.5E-07	1.8E-04	2.6E-09	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	38.0	--	--	38.0	5.5E-04	0.11	1.5E-06	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	29.1	--	--	29.1	4.2E-04	0.081	1.2E-06	--	--	--	--	--	--	--	--	--	--
Phthalates	-51-8	No	0.16	--	--	0.16	2.2E-06	4.4E-04	6.3E-09	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	41.4	--	--	41.4	6.0E-04	0.12	1.7E-06	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	25.1	--	--	25.1	3.6E-04	0.070	1.0E-06	--	--	--	--	--	--	0.046	6.6E-07	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	396	--	--	396	5.7E-03	1.10	1.6E-05	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	26.1	--	--	26.1	3.8E-04	0.073	1.0E-06	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	28.2	--	--	28.2	4.1E-04	0.079	1.1E-06	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	0.16	--	--	0.16	2.3E-06	4.5E-04	6.5E-09	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	0.033	--	--	0.033	4.8E-07	9.3E-05	1.3E-09	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	0.26	--	--	0.26	3.7E-06	7.1E-04	1.0E-08	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	19.7	--	--	19.7	2.8E-04	0.055	7.9E-07	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	0.28	--	--	0.28	4.1E-06	7.9E-04	1.1E-08	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	0.30	--	--	0.30	4.4E-06	8.5E-04	1.2E-08	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	34.9	--	--	34.9	5.0E-04	0.097	1.4E-06	--	--	--	--	--	--	--	--	--	--
Diesel Particulate Matter (DPM)																			
DPM	200	Yes	--	--	--	--	--	--	--	--	--	--	--	35.2	5.1E-04	--	--	--	--
Total TAC Emission Estimate			**24,519**	**940**	**940**	**26,399**	**0.38**	**120**	**1.7E-03**	**3.80**	**5.5E-05**	**3.80**	**5.5E-05**	**40.1**	**5.8E-04**	**72.8**	**1.0E-03**	**376**	**5.4E-03**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) x (yr/8,760 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-1 (Cont.)
Proposed Annual TAC Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Significant TEUs [1]																							
			Steam Tunnel 1						Steam Tunnel 2								Plant 1 Welding Emissions	Plant 1 Welding MB Emissions	Total Plant 1 Welding MB Emissions		Plant 1 MB Emissions		Plant 2 Welding Emissions		Plant 2 MB Emissions	
TEU ID			TUNS1						TUNS2								WELD_P1	WELD_P1	--		MB_P1		WELD_P2		MB_P2	
Dispersion Model ID			TUNS1A		TUNS1B		TUNS1C		TUNS2A		TUNS2B		TUNS2C		TUNS2D		--		WELD_P1		MB_P1		WELD_P2		MB_P2	
Emission Rate Units			(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]
METALS																										
Antimony and Compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and Compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6E-04	2.4E-09	--	--
Aluminum Oxide	1344-28-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.7E-03	--	4.7E-03	6.8E-08	--	--	4.7E-03	6.8E-08	--	--
Arsenic and Compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and Compounds	7440-39-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33.8	4.9E-04	--	--	33.8	4.9E-04
Beryllium and Compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540-29-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5E-03	--	2.5E-03	3.6E-08	--	--	--	--	--	--
Cobalt and Compounds	7440-48-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and Compounds	7440-50-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.7E-04	1.3E-08	--	--
Lead and Compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.062	--	0.062	8.9E-07	--	--	0.038	5.5E-07	--	--
Mercury and Compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.4E-03	--	8.4E-03	1.2E-07	--	--	--	--	--	--
Nickel	365	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and Compounds	504	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.5E-05	--	4.5E-05	6.5E-10	--	--	4.5E-05	6.5E-10	--	--
Selenium and Compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and Compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and Compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium	7440-47-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.051	--	0.051	7.3E-07	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and Compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS																										
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.48	5.0E-05	--	--	3.48	5.0E-05
1,2,4-Trimethylbenzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.045	0.045	6.4E-07	33.7	4.8E-04	--	--	33.7	4.8E-04	
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.013	0.013	1.9E-07	4.52	6.5E-05	--	--	4.52	6.5E-05	
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.13	3.13	4.5E-05	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	376	5.4E-03	376	5.4E-03	376	5.4E-03	282	4.1E-03	282	4.1E-03	282	4.1E-03	282	4.1E-03	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	240	3.5E-03	240	3.5E-03	240	3.5E-03	180	2.6E-03	180	2.6E-03	180	2.6E-03	180	2.6E-03	--	1.25	1.25	1.8E-05	1,958	0.028	--	--	1,958	0.028
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.013	0.013	1.9E-07	3.48	5.0E-05	--	--	3.48	5.0E-05
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	-23-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	0.21	3.0E-06	--	--	0.11	1.6E-06	--	--
Formaldehyde	50-00-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric Acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen Fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isoprene	78-79-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl Alcohol	67-63-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	584	8.4E-03	584	8.4E-03	584	8.4E-03	438	6.3E-03	438	6.3E-03	438	6.3E-03	438	6.3E-03	--	--	--	--	--	--	--	--	--	--
Methyl Isobutyl Ketone	108-10-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silicon dioxide (amorphous)	7631-86-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.049	--	0.049	7.1E-07	--	--	0.024	3.5E-07	--	--
Sodium Hydroxide	1310-73-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	785	0.011	--	--	785	0.011
Trimethylbenzene	25551-13-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10.4	1.5E-04	--	--	10.4	1.5E-04
Vanadium Pentoxide	1314-62-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.045	0.045	6.4E-07	9.39	1.4E-04	--	--	9.39	1.4E-04
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)																										
PAHs (excluding Naphthalene)	401	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIOXINS AND FURANS																										
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)																										
Polychlorinated Biphenyls	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates	-51-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.48	5.0E-05	--	--	3.48	5.0E-05
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Particulate Matter (DPM)																										
DPM	200	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emission Estimate			**1,200**	**0.017**	**1,200**	**0.017**	**1,200**	**0.017**	**900**	**0.013**	**900**	**0.013**	**900**	**0.013**	**900**	**0.013**	**0.38**	**4.50**	**4.88**	**7.0E-05**	**2,845**	**0.041**	**0.18**	**2.6E-06**	**2,845**	**0.041**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) x (yr/8,760 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-1 (Cont.)
Proposed Annual TAC Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Significant TEUs [1]												
			Plant 4 Welding Emissions	Plant 4 MB Emissions		Total Plant 4 Fugitive Emissions		Cat Shop Welding Emissions	Cat Shop MB Emissions	Total Cat Shop Fugitive Emissions		Fab Shop Welding Emissions	Fab Shop MB Emissions	Total Fab Shop Fugitive Emissions	
TEU ID			*FUG_P4*	MB_P4	WELD_P4	--		CAT_SHOP	CAT_MB	--		FAB_SHOP	FAB_MB	--	
Dispersion Model ID			--			FUG_P4		--		CAT_SHOP		--		FAB_SHOP	
Emission Rate Units			(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]	(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]	(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]
METALS															
Antimony and Compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and Compounds	7429-90-5	Yes	--	--	--	--	--	4.1E-04	--	4.1E-04	5.9E-09	6.8E-04	--	6.8E-04	9.7E-09
Aluminum Oxide	1344-28-1	No	--	--	--	--	--	1.6E-03	--	1.6E-03	2.3E-08	9.5E-04	--	9.5E-04	1.4E-08
Arsenic and Compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and Compounds	7440-39-3	No	--	33.8	--	33.8	4.9E-04	--	--	--	--	--	--	--	--
Beryllium and Compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540-29-9	Yes	--	--	--	--	--	2.9E-04	--	2.9E-04	4.1E-09	2.5E-03	--	2.5E-03	3.6E-08
Cobalt and Compounds	7440-48-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and Compounds	7440-50-8	Yes	--	--	--	--	--	2.6E-03	--	2.6E-03	3.7E-08	0.010	--	0.010	1.5E-07
Lead and Compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	0.034	--	--	0.034	5.0E-07	0.044	--	0.044	6.3E-07	0.073	--	0.073	1.0E-06
Mercury and Compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	9.8E-04	--	9.8E-04	1.4E-08	0.012	--	0.012	1.7E-07
Nickel	365	Yes	--	--	--	--	--	2.2E-03	--	2.2E-03	3.1E-08	0.050	--	0.050	7.2E-07
Phosphorus and Compounds	504	No	4.5E-05	--	--	4.5E-05	6.5E-10	1.1E-04	--	1.1E-04	1.6E-09	2.5E-04	--	2.5E-04	3.6E-09
Selenium and Compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and Compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and Compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium	7440-47-3	No	--	--	--	--	--	5.7E-03	--	5.7E-03	8.3E-08	0.050	--	0.050	7.2E-07
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and Compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS															
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	3.48	--	3.48	5.0E-05	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	Yes	--	33.7	0.045	33.7	4.8E-04	--	0.045	0.045	6.4E-07	--	0.045	0.045	6.4E-07
1,3,5-Trimethylbenzene	108-67-8	Yes	--	4.52	0.013	4.53	6.5E-05	--	0.013	0.013	1.9E-07	--	0.013	0.013	1.9E-07
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	3.13	3.13	4.5E-05	--	3.13	3.13	4.5E-05	--	3.13	3.13	4.5E-05
Acetaldehyde	75-07-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	--	1,958	1.25	1,959	0.028	--	1.25	1.25	1.8E-05	--	1.25	1.25	1.8E-05
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	41.9	--	41.9	6.0E-04	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	--	3.48	0.013	3.49	5.0E-05	--	0.013	0.013	1.9E-07	--	0.013	0.013	1.9E-07
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	-23-9	Yes	0.049	--	--	0.049	7.1E-07	0.11	--	0.11	1.5E-06	0.11	--	0.11	1.6E-06
Formaldehyde	50-00-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric Acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen Fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Isoprene	78-79-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl Alcohol	67-63-0	Yes	--	37.6	--	37.6	5.4E-04	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Isobutyl Ketone	108-10-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Silicon dioxide (amorphous)	7631-86-9	Yes	0.015	--	--	0.015	2.1E-07	0.029	--	0.029	4.2E-07	0.032	--	0.032	4.6E-07
Sodium Hydroxide	1310-73-2	Yes	--	21.9	--	21.9	3.2E-04	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	--	785	--	785	0.011	--	--	--	--	--	--	--	--
Trimethylbenzene	25551-13-7	No	--	10.4	--	10.4	1.5E-04	--	--	--	--	--	--	--	--
Vanadium Pentoxide	1314-62-1	Yes	--	--	--	--	--	1.5E-04	--	1.5E-04	2.2E-09	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	--	9.39	0.045	9.43	1.4E-04	--	0.045	0.045	6.4E-07	--	0.045	0.045	6.4E-07
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)															
PAHs (excluding Naphthalene)	401	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--
DIOXINS AND FURANS															
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)															
Polychlorinated Biphenyls	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates	-51-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	--	3.48	--	3.48	5.0E-05	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Particulate Matter (DPM)															
DPM	200	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emission Estimate			**0.099**	**2,946**	**4.50**	**2,951**	**0.042**	**0.19**	**4.50**	**4.69**	**6.7E-05**	**0.34**	**4.50**	**4.84**	**7.0E-05**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) x (yr/8,760 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-2
Proposed Daily TAC Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Significant TEUs [1]															
			Wood Fuel Combustion in Boiler 3	Veneer Dryer 1 Heated Zones	Veneer Dryer 2 Heated Zones	Total Emissions Through Boiler 3 Exhaust		Wood Fuel Combustion in Boiler 3 During Startup		Cooling Tower Cell 1		Cooling Tower Cell 2		Emergency Diesel Generator Fire Pump		Gasoline Dispensing Facility	
TEU ID			BLR3	VD1_HEAT	VD2_HEAT			BLR3_SU		CT01		CT02		FIRE		GDF	
Dispersion Model ID			--			BLR3		BLR3_SU		CT01		CT02		FIRE		GDF	
Emission Rate Units			(lb/day)	(lb/day)	(lb/day)	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]
METALS																	
Antimony and Compounds	7440-36-0	Yes	1.2E-03	--	--	1.2E-03	6.4E-06	4.1E-04	2.2E-06	--	--	--	--	1.0E-05	5.3E-08	--	--
Aluminum and Compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum Oxide	1344-28-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and Compounds	7440-38-2	Yes	7.5E-03	--	--	7.5E-03	3.9E-05	1.1E-03	5.9E-06	--	--	--	--	5.0E-05	2.6E-07	--	--
Barium and Compounds	7440-39-3	No	0.83	--	--	0.83	4.3E-03	0.64	3.3E-03	--	--	--	--	1.2E-05	6.2E-08	--	--
Beryllium and Compounds	7440-41-7	Yes	1.1E-04	--	--	1.1E-04	5.9E-07	1.8E-05	9.4E-08	--	--	--	--	1.5E-07	7.9E-10	--	--
Cadmium and Compounds	7440-43-9	Yes	1.3E-03	--	--	1.3E-03	6.7E-06	6.6E-04	3.5E-06	--	--	--	--	4.7E-05	2.5E-07	--	--
Chromium VI	18540-29-9	Yes	1.1E-03	--	--	1.1E-03	5.7E-06	9.2E-04	4.8E-06	--	--	--	--	3.2E-06	1.7E-08	--	--
Cobalt and Compounds	7440-48-4	Yes	2.0E-03	--	--	2.0E-03	1.0E-05	2.2E-04	1.2E-06	--	--	--	--	5.0E-07	2.6E-09	--	--
Copper and Compounds	7440-50-8	Yes	0.015	--	--	0.015	7.9E-05	0.011	5.7E-05	--	--	--	--	1.3E-04	6.8E-07	--	--
Lead and Compounds	7439-92-1	Yes	0.021	--	--	0.021	1.1E-04	4.1E-03	2.1E-05	--	--	--	--	2.6E-04	1.4E-06	--	--
Manganese and Compounds	7439-96-5	Yes	0.38	--	--	0.38	2.0E-03	0.24	1.3E-03	--	--	--	--	9.8E-05	5.1E-07	--	--
Mercury and Compounds	7439-97-6	Yes	4.2E-03	--	--	4.2E-03	2.2E-05	2.3E-04	1.2E-06	--	--	--	--	6.3E-05	3.3E-07	--	--
Molybdenum trioxide	1313-27-5	No	0.012	--	--	0.012	6.5E-05	4.2E-04	2.2E-06	--	--	--	--	--	--	--	--
Nickel	365	Yes	0.011	--	--	0.011	5.8E-05	1.7E-03	9.1E-06	--	--	--	--	1.2E-04	6.4E-07	--	--
Phosphorus and Compounds	504	No	1.23	--	--	1.23	6.4E-03	0.72	3.8E-03	--	--	--	--	2.6E-04	1.4E-06	--	--
Selenium and Compounds	7782-49-2	Yes	6.4E-03	--	--	6.4E-03	3.4E-05	9.6E-05	5.0E-07	--	--	--	--	6.9E-05	3.6E-07	--	--
Silver and Compounds	7440-22-4	No	3.9E-03	--	--	3.9E-03	2.0E-05	0.12	6.5E-04	--	--	--	--	1.5E-06	7.9E-09	--	--
Thallium and Compounds	7440-28-0	No	7.3E-03	--	--	7.3E-03	3.8E-05	2.4E-04	1.3E-06	--	--	--	--	7.6E-06	4.0E-08	--	--
Total Chromium	7440-47-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	2.4E-03	--	--	2.4E-03	1.2E-05	1.3E-04	6.8E-07	--	--	--	--	--	--	--	--
Zinc and Compounds	7440-66-6	No	0.23	--	--	0.23	1.2E-03	0.075	3.9E-04	--	--	--	--	1.6E-04	8.6E-07	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS																	
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	0.23	--	--	0.23	1.2E-03	7.6E-03	4.0E-05	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2E-04	1.1E-06
1,2,4-Trimethylbenzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2E-03	6.5E-06
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	4.8E-04	2.5E-06
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	0.067	--	--	0.067	3.5E-04	2.2E-03	1.2E-05	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	6.8E-03	3.6E-05	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	0.048	2.5E-04
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	0.028	--	--	0.028	1.4E-04	9.2E-04	4.8E-06	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	1.12	0.71	0.71	2.55	0.013	0.037	2.0E-04	--	--	--	--	0.025	1.3E-04	--	--
Acetone	67-64-1	Yes	2.09	0.55	0.55	3.19	0.017	0.070	3.7E-04	--	--	--	--	--	--	--	--
Acetophenone	98-86-2	No	7.3E-03	--	--	7.3E-03	3.8E-05	2.4E-04	1.3E-06	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	1.03	0.055	0.055	1.14	6.0E-03	0.034	1.8E-04	--	--	--	--	1.1E-03	5.6E-06	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	0.025	1.3E-04	--	--
Benzene	71-43-2	Yes	3.88	0.025	0.025	3.93	0.021	0.13	6.8E-04	--	--	--	--	5.9E-03	3.1E-05	0.017	8.9E-05
Bromomethane (Methyl bromide)	74-83-9	Yes	0.045	--	--	0.045	2.3E-04	1.5E-03	7.8E-06	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	0.039	--	--	0.039	2.1E-04	1.3E-03	6.8E-06	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	3.13	--	--	3.13	0.016	0.10	5.5E-04	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	0.066	--	--	0.066	3.5E-04	2.2E-03	1.2E-05	--	--	--	--	6.3E-06	3.3E-08	--	--
Chloroform	67-66-3	Yes	0.080	--	--	0.080	4.2E-04	2.7E-03	1.4E-05	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	0.17	--	--	0.17	9.0E-04	5.7E-03	3.0E-05	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	0.18	--	--	0.18	9.3E-04	5.9E-03	3.1E-05	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	0.014	7.4E-05
Dibutyl phthalate	84-74-2	No	0.13	--	--	0.13	6.9E-04	4.4E-03	2.3E-05	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	1.58	--	--	1.58	8.3E-03	0.053	2.8E-04	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	0.17	--	--	0.17	9.1E-04	5.8E-03	3.0E-05	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	0.048	--	--	0.048	2.5E-04	1.6E-03	8.5E-06	--	--	--	--	3.4E-04	1.8E-06	4.4E-03	2.3E-05
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	-23-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	4.16	0.59	0.59	5.33	0.028	0.14	7.3E-04	--	--	--	--	0.054	2.9E-04	--	--
Hexane	110-54-3	Yes	1.14	--	--	1.14	6.0E-03	0.038	2.0E-04	--	--	--	--	8.5E-04	4.4E-06	0.067	3.5E-04
Hydrochloric Acid	7647-01-0	Yes	17.3	--	--	17.3	0.091	0.58	3.0E-03	--	--	--	--	5.9E-03	3.1E-05	--	--
Hydrogen Fluoride	7664-39-3	Yes	0.36	--	--	0.36	1.9E-03	0.012	6.3E-05	--	--	--	--	--	--	--	--
Isoprene	78-79-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	8.3E-04	4.4E-06
Isopropyl Alcohol	67-63-0	Yes	17.9	--	--	17.9	0.094	0.60	3.1E-03	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	2.90	1.64	1.64	6.17	0.032	0.097	5.1E-04	--	--	--	--	--	--	--	--
Methyl Isobutyl Ketone	108-10-1	Yes	1.76	0.063	0.063	1.89	9.9E-03	0.059	3.1E-04	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	8.3E-03	4.4E-05
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	3.9E-03	2.0E-05
Phenol	108-95-2	Yes	0.63	0.14	0.14	0.92	4.8E-03	0.021	1.1E-04	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	1.23	0.10	0.10	1.43	7.5E-03	0.041	2.2E-04	--	--	--	--	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	0.015	7.8E-05	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	3.6E-03	1.9E-05
Silicon dioxide (amorphous)	7631-86-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium Hydroxide	1310-73-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	1.86	--	--	1.86	9.8E-03	0.062	3.3E-04	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	--	--	--	--	--	--	--	0.010	5.5E-05	0.010	5.5E-05	--	--	--	--
Toluene	108-88-3	Yes	0.045	0.046	0.046	0.14	7.2E-04	1.5E-03	7.9E-06	--	--	--	--	3.3E-03	1.7E-05	0.042	2.2E-04
Trimethylbenzene	25551-13-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium Pentoxide	1314-62-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	0.021	0.032	0.032	0.084	4.4E-04	6.9E-04	3.6E-06	--	--	--	--	1.3E-03	7.0E-06	--	--
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)																	
PAHs (excluding Naphthalene)	401	Yes	--	--	--	--	--	--	--	--	--	--	--	1.1E-03	6.0E-06	--	--
2-Methyl naphthalene	91-57-6	No	5.5E-03	--	--	5.5E-03	2.9E-05	1.8E-04	9.7E-07	--	--	--	--	--	--	5.7E-06	3.0E-08
Acenaphthene	83-32-9	No	3.4E-03	--	--	3.4E-03	1.8E-05	1.1E-04	5.9E-07	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	0.019	--	--	0.019	9.8E-05	6.2E-04	3.3E-06	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	0.011	--	--	0.011	5.6E-05	3.5E-04	1.9E-06	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	8.8E-03	--	--	8.8E-03	4.6E-05	2.9E-04	1.5E-06	--	--	--	--	1.1E-06	5.8E-09	--	--
Benz[a]anthracene	56-55-3	Yes	3.2E-04	--	--	3.2E-04	1.7E-06	1.1E-05	5.6E-08	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	5.6E-04	--	--	5.6E-04	3.0E-06	1.9E-05	9.8E-08	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	8.4E-04	--	--	8.4E-04	4.4E-06	2.8E-05	1.5E-07	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	6.0E-04	--	--	6.0E-04	3.1E-06	2.0E-05	1.0E-07	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	6.2E-04	--	--	6.2E-04	3.2E-06	2.1E-05	1.1E-07	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	2.1E-04	--	--	2.1E-04	1.1E-06	6.8E-06	3.6E-08	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	3.1E-04	--	--	3.1E-04	1.6E-06	1.0E-05	5.5E-08	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	6.6E-03	--	--	6.6E-03	3.5E-05	2.2E-04	1.2E-06	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	0.012	--	--	0.012	6.3E-05	4.0E-04	2.1E-06	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	4.0E-04	--	--	4.0E-04	2.1E-06	1.3E-05	7.1E-08	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	0.39	--	--	0.39	2.1E-03	0.013	6.9E-05	--	--	--	--	6.2E-04	3.3E-06	1.8E-05	9.7E-08
Perylene	198-55-0	No	1.3E-04	--	--	1.3E-04	6.7E-07	4.2E-06	2.2E-08	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	0.026	--	--	0.026	1.3E-04	8.5E-04	4.5E-06	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	0.014	--	--	0.014	7.4E-05	4.7E-04	2.5E-06	--	--	--	--	--	--	--	--
DIOXINS AND FURANS																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	3.8E-09	--	--	3.8E-09	2.0E-11	1.3E-10	6.6E-13	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	5.3E-09	--	--	5.3E-09	2.8E-11	1.8E-10	9.2E-13	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	3.4E-09	--	--	3.4E-09	1.8E-11	1.1E-10	6.0E-13	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	8.3E-09	--	--	8.3E-09	4.3E-11	2.8E-10	1.4E-12	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	8.8E-09	--	--	8.8E-09	4.6E-11	2.9E-10	1.5E-12	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	3.9E-08	--	--	3.9E-08	2.0E-10	1.3E-09	6.8E-12	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	9.7E-08	--	--	9.7E-08	5.1E-10	3.2E-09	1.7E-11	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	Yes	3.2E-08	--	--	3.2E-08	1.7E-10	1.1E-09	5.6E-12	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	1.6E-08	--	--	1.6E-08	8.3E-11	5.3E-10	2.8E-12	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	2.4E-08	--	--	2.4E-08	1.3E-10	8.0E-10	4.2E-12	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	1.4E-08	--	--	1.4E-08	7.4E-11	4.7E-10	2.5E-12	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	1.3E-08	--	--	1.3E-08	6.6E-11	4.2E-10	2.2E-12	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	2.6E-09	--	--	2.6E-09	1.4E-11	8.8E-11	4.6E-13	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	1.1E-08	--	--	1.1E-08	5.5E-11	3.5E-10	1.8E-12	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	2.3E-08	--	--	2.3E-08	1.2E-10	7.5E-10	4.0E-12	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	3.2E-09	--	--	3.2E-09	1.7E-11	1.1E-10	5.5E-13	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	2.0E-08	--	--	2.0E-08	1.0E-10	6.6E-10	3.5E-12	--	--	--	--	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)																	
Polychlorinated Biphenyls	1336-36-3	Yes	3.1E-05	--	--	3.1E-05	1.6E-07	1.0E-06	5.4E-09	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	1.0E-03	--	--	1.0E-03	5.4E-06	3.4E-05	1.8E-07	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	Yes	3.4E-05	--	--	3.4E-05	1.8E-07	1.1E-06	6.0E-09	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	1.8E-05	--	--	1.8E-05	9.5E-08	6.0E-07	3.2E-09	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	3.7E-03	--	--	3.7E-03	2.0E-05	1.2E-04	6.5E-07	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	8.3E-03	--	--	8.3E-03	4.4E-05	2.8E-04	1.5E-06	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	1.8E-04	--	--	1.8E-04	9.7E-07	6.1E-06	3.2E-08	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	0.11	--	--	0.11	5.6E-04	3.5E-03	1.9E-05	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	0.081	--	--	0.081	4.3E-04	2.7E-03	1.4E-05	--	--	--	--	--	--	--	--
Phthalates	-51-8	No	4.4E-04	--	--	4.4E-04	2.3E-06	1.5E-05	7.6E-08	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	0.12	--	--	0.12	6.1E-04	3.9E-03	2.0E-05	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	0.070	--	--	0.070	3.7E-04	2.3E-03	1.2E-05	--	--	--	--	--	--	1.3E-04	7.0E-07
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	1.10	--	--	1.10	5.8E-03	0.037	1.9E-04	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	0.073	--	--	0.073	3.8E-04	2.4E-03	1.3E-05	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	0.079	--	--	0.079	4.1E-04	2.6E-03	1.4E-05	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	4.5E-04	--	--	4.5E-04	2.4E-06	1.5E-05	7.9E-08	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	9.3E-05	--	--	9.3E-05	4.9E-07	3.1E-06	1.6E-08	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	7.1E-04	--	--	7.1E-04	3.7E-06	2.4E-05	1.2E-07	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	0.055	--	--	0.055	2.9E-04	1.8E-03	9.6E-06	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	7.9E-04	--	--	7.9E-04	4.2E-06	2.6E-05	1.4E-07	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	8.5E-04	--	--	8.5E-04	4.4E-06	2.8E-05	1.5E-07	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	0.097	--	--	0.097	5.1E-04	3.2E-03	1.7E-05	--	--	--	--	--	--	--	--
Diesel Particulate Matter (DPM)																	
DPM	200	Yes	--	--	--	--	--	--	--	--	--	--	--	1.06	5.5E-03	--	--
Total TAC Emission Estimate			**68.4**	**3.95**	**3.95**	**76.3**	**0.40**	**4.01**	**0.021**	**0.010**	**5.5E-05**	**0.010**	**5.5E-05**	**1.20**	**6.3E-03**	**0.21**	**1.1E-03**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (daily emissions estimate [lb/day]) x (453.592 g/lb) x (day/24 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-2 (Cont.)
Proposed Daily TAC Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Significant TEUs [1]																					
			Veneer Dryer Fugitives		Steam Tunnel 1						Steam Tunnel 2								Plant 1 Welding Emissions	Plant 1 Welding MB Emissions	Total Plant 1 Welding MB Emissions		Plant 1 Material Balance Emissions	
TEU ID			DRY_FUG		TUNS1						TUNS2								WELD_P1	WELD_P1	--		MB_P1	
Dispersion Model ID			DRY_FUG		TUNS1A		TUNS1B		TUNS1C		TUNS2A		TUNS2B		TUNS2C		TUNS2D		--		WELD_P1		MB_P1	
Emission Rate Units			(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(lb/day)	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]
METALS																								
Antimony and Compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and Compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum Oxide	1344-28-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6E-05	--	1.6E-05	8.6E-08	--	--
Arsenic and Compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and Compounds	7440-39-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	5.9E-04
Beryllium and Compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540-29-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.7E-06	--	8.7E-06	4.6E-08	--	--
Cobalt and Compounds	7440-48-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and Compounds	7440-50-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead and Compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2E-04	--	2.2E-04	1.1E-06	--	--
Mercury and Compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.9E-05	--	2.9E-05	1.5E-07	--	--
Nickel	365	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and Compounds	504	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5E-07	--	1.5E-07	7.9E-10	--	--
Selenium and Compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and Compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and Compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium	7440-47-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7E-04	--	1.7E-04	9.2E-07	--	--
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and Compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS																								
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.014	7.3E-05
1,2,4-Trimethylbenzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8E-04	1.8E-04	--	0.12	6.1E-04
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.4E-05	5.4E-05	--	0.018	9.5E-05
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.015	0.015	--	--	--
Acetaldehyde	75-07-0	Yes	0.29	1.5E-03	2.26	0.012	2.26	0.012	2.26	0.012	1.69	8.9E-03	1.69	8.9E-03	1.69	8.9E-03	1.69	8.9E-03	--	--	--	--	--	--
Acetone	67-64-1	Yes	0.22	1.1E-03	1.44	7.6E-03	1.44	7.6E-03	1.44	7.6E-03	1.08	5.7E-03	1.08	5.7E-03	1.08	5.7E-03	1.08	5.7E-03	--	5.0E-03	5.0E-03	--	6.65	0.035
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	0.022	1.1E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	9.9E-03	5.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.4E-05	5.4E-05	--	0.014	7.3E-05
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	-23-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.5E-04	--	7.5E-04	3.9E-06	--	--
Formaldehyde	50-00-0	Yes	0.24	1.2E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric Acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen Fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isoprene	78-79-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl Alcohol	67-63-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	0.66	3.4E-03	3.50	0.018	3.50	0.018	3.50	0.018	2.63	0.014	2.63	0.014	2.63	0.014	2.63	0.014	--	--	--	--	--	--
Methyl Isobutyl Ketone	108-10-1	Yes	0.025	1.3E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	0.057	3.0E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	0.040	2.1E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silicon dioxide (amorphous)	7631-86-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8E-04	--	1.8E-04	9.5E-07	--	--
Sodium Hydroxide	1310-73-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	0.018	9.7E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.64	0.014
Trimethylbenzene	25551-13-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.042	2.2E-04
Vanadium Pentoxide	1314-62-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	0.013	6.6E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8E-04	1.8E-04	--	0.038	2.0E-04
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)																								
PAHs (excluding Naphthalene)	401	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIOXINS AND FURANS																								
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)																								
Polychlorinated Biphenyls	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates	-51-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.014	7.3E-05
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Particulate Matter (DPM)																								
DPM	200	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emission Estimate			**1.58**	**8.3E-03**	**7.20**	**0.038**	**7.20**	**0.038**	**7.20**	**0.038**	**5.40**	**0.028**	**5.40**	**0.028**	**5.40**	**0.028**	**5.40**	**0.028**	**1.4E-03**	**0.021**	**0.022**	**7.2E-06**	**9.65**	**0.051**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (daily emissions estimate [lb/day]) x (453.592 g/lb) x (day/24 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-2 (Cont.)
Proposed Daily TAC Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Significant TEUs [1]																
			Plant 2 Welding Emissions		Plant 2 Material Balance Emissions		Plant 4 Welding Emissions	Plant 4 Material Balance Emissions		Total Plant 4 Fugitive Emissions		Cat Shop Welding Emissions	Cat Shop Material Balance Emissions	Total Cat Shop Fugitive Emissions		Fab Shop Welding Emissions	Fab Shop Material Balance Emissions	Total Fab Shop Fugitive Emissions	
TEU ID			WELD_P2		MB_P2		*FUG_P4*	MB_P4	WELD_P4	--		CAT_SHOP	CAT_MB	--		FAB_SHOP	FAB_MB	--	
Dispersion Model ID			WELD_P2		MB_P2		--			FUG_P4		--		CAT_SHOP		--		FAB_SHOP	
Emission Rate Units			(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(lb/day)	(lb/day)	(lb/day)	(g/s) [a]	(lb/day)	(lb/day)	(lb/day)	(g/s) [a]	(lb/day)	(lb/day)	(lb/day)	(g/s) [a]
METALS																			
Antimony and Compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and Compounds	7429-90-5	Yes	6.6E-07	3.4E-09	--	--	--	--	--	--	--	1.6E-06	--	1.6E-06	8.6E-09	2.4E-06	--	2.4E-06	1.2E-08
Aluminum Oxide	1344-28-1	No	1.6E-05	8.6E-08	--	--	--	--	--	--	--	6.3E-06	--	6.3E-06	3.3E-08	3.8E-06	--	3.8E-06	2.0E-08
Arsenic and Compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and Compounds	7440-39-3	No	--	--	0.11	5.9E-04	--	0.11	--	0.11	5.9E-04	--	--	--	--	--	--	--	--
Beryllium and Compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540-29-9	Yes	--	--	--	--	--	--	--	--	--	1.1E-06	--	1.1E-06	6.0E-09	1.0E-05	--	1.0E-05	5.2E-08
Cobalt and Compounds	7440-48-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and Compounds	7440-50-8	Yes	3.5E-06	1.8E-08	--	--	--	--	--	--	--	1.0E-05	--	1.0E-05	5.5E-08	3.9E-05	--	3.9E-05	2.0E-07
Lead and Compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	1.3E-04	7.0E-07	--	--	1.2E-04	--	--	1.2E-04	6.2E-07	1.7E-04	--	1.7E-04	8.7E-07	2.8E-04	--	2.8E-04	1.4E-06
Mercury and Compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	3.9E-06	--	3.9E-06	2.1E-08	4.6E-05	--	4.6E-05	2.4E-07
Nickel	365	Yes	--	--	--	--	--	--	--	--	--	8.6E-06	--	8.6E-06	4.5E-08	2.0E-04	--	2.0E-04	1.0E-06
Phosphorus and Compounds	504	No	1.5E-07	7.9E-10	--	--	1.5E-07	--	--	1.5E-07	7.9E-10	3.9E-07	--	3.9E-07	2.1E-09	9.6E-07	--	9.6E-07	5.1E-09
Selenium and Compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and Compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and Compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium	7440-47-3	No	--	--	--	--	--	--	--	--	--	2.3E-05	--	2.3E-05	1.2E-07	2.0E-04	--	2.0E-04	1.0E-06
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and Compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS																			
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	0.014	7.3E-05	--	0.014	--	0.014	7.3E-05	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	Yes	--	--	0.12	6.1E-04	--	0.12	1.8E-04	0.12	6.1E-04	--	1.8E-04	1.8E-04	9.4E-07	--	1.8E-04	1.8E-04	9.4E-07
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	0.018	9.5E-05	--	0.018	5.4E-05	0.018	9.5E-05	--	5.4E-05	5.4E-05	2.8E-07	--	5.4E-05	5.4E-05	2.8E-07
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	--	--	--	--	0.015	0.015	8.0E-05	--	0.015	0.015	8.0E-05	--	0.015	0.015	8.0E-05
Acetaldehyde	75-07-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	--	--	6.65	0.035	--	6.65	5.0E-03	6.66	0.035	--	5.0E-03	5.0E-03	2.6E-05	--	5.0E-03	5.0E-03	2.6E-05
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	0.21	--	0.21	1.1E-03	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	--	--	0.014	7.3E-05	--	0.014	5.4E-05	0.014	7.3E-05	--	5.4E-05	5.4E-05	2.8E-07	--	5.4E-05	5.4E-05	2.8E-07
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	-23-9	Yes	4.0E-04	2.1E-06	--	--	1.7E-04	--	--	1.7E-04	9.0E-07	4.3E-04	--	4.3E-04	2.3E-06	4.0E-04	--	4.0E-04	2.1E-06
Formaldehyde	50-00-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric Acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen Fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isoprene	78-79-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl Alcohol	67-63-0	Yes	--	--	--	--	--	0.19	--	0.19	9.9E-04	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl Isobutyl Ketone	108-10-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silicon dioxide (amorphous)	7631-86-9	Yes	8.4E-05	4.4E-07	--	--	5.2E-05	--	--	5.2E-05	2.7E-07	1.2E-04	--	1.2E-04	6.1E-07	1.1E-04	--	1.1E-04	5.8E-07
Sodium Hydroxide	1310-73-2	Yes	--	--	--	--	--	0.11	--	0.11	5.7E-04	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	--	--	2.64	0.014	--	2.64	--	2.64	0.014	--	--	--	--	--	--	--	--
Trimethylbenzene	25551-13-7	No	--	--	0.042	2.2E-04	--	0.042	--	0.042	2.2E-04	--	--	--	--	--	--	--	--
Vanadium Pentoxide	1314-62-1	Yes	--	--	--	--	--	--	--	--	--	6.1E-07	--	6.1E-07	3.2E-09	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	--	--	0.038	2.0E-04	--	0.038	1.8E-04	0.038	2.0E-04	--	1.8E-04	1.8E-04	9.4E-07	--	1.8E-04	1.8E-04	9.4E-07
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)																			
PAHs (excluding Naphthalene)	401	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DIOXINS AND FURANS																			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)																			
Polychlorinated Biphenyls	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalates	-51-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	0.014	7.3E-05	--	0.014	--	0.014	7.3E-05	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Particulate Matter (DPM)																			
DPM	200	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emission Estimate			**6.3E-04**	**3.3E-06**	**9.65**	**0.051**	**3.4E-04**	**10.2**	**0.021**	**10.2**	**0.053**	**7.7E-04**	**0.021**	**0.021**	**1.1E-04**	**1.3E-03**	**0.021**	**0.022**	**1.2E-04**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (daily emissions estimate [lb/day]) x (453.592 g/lb) x (day/24 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-3
Proposed Acute Risk Equivalent Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

Toxic Air Contaminant	CAS or DEQ ID	Acute RBC (Yes/No)	Acute RBC [1] (ug/m³)	Acute Risk Equivalent Emission Rate [a] (g/s per ug/m³)										
				Total Emissions Through Boiler 3 Exhaust	Wood Fuel Combustion in Boiler 3 During Startup	Cooling Tower Cell 1	Cooling Tower Cell 2	Veneer Dryer Fugitives	Emergency Diesel Generator Fire Pump	Gasoline Dispensing Facility	Steam Tunnel 1 Throughput	Steam Tunnel 1 Throughput	Steam Tunnel 1 Throughput	Steam Tunnel 2 Throughput
Model ID	--	--	--	BLR3	BLR3_SU	CT01	CT02	DRY_FUG	FIRE	GDF	TUNS1A	TUNS1B	TUNS1C	TUNS2A
Antimony and compounds	7440-36-0	Yes	1.00	6.4E-06	2.2E-06	--	--	--	5.3E-08	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	0.20	2.0E-04	3.0E-05	--	--	--	1.3E-06	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	0.020	3.0E-05	4.7E-06	--	--	--	3.9E-08	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	0.030	2.2E-04	1.2E-04	--	--	--	8.3E-06	--	--	--	--	--
Chromium VI (particulate)	18540-29-9	Yes	0.30	1.9E-05	1.6E-05	--	--	--	5.5E-08	--	--	--	--	--
Cobalt and compounds	7440-48-4	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	100.0	7.9E-07	5.7E-07	--	--	--	6.8E-09	--	--	--	--	--
Lead and compounds	7439-92-1	Yes	0.15	7.2E-04	1.4E-04	--	--	--	9.2E-06	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	0.30	6.6E-03	4.3E-03	--	--	--	1.7E-06	--	--	--	--	--
Mercury and compounds	7439-97-6	Yes	0.60	3.7E-05	2.0E-06	--	--	--	5.5E-07	--	--	--	--	--
Nickel and compounds (Insoluble)	365	Yes	0.20	2.9E-04	4.6E-05	--	--	--	3.2E-06	--	--	--	--	--
Selenium and compounds	7782-49-2	Yes	2.00	1.7E-05	2.5E-07	--	--	--	1.8E-07	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.80	1.5E-05	8.5E-07	--	--	--	--	--	--	--	--	--
Silicon dioxide (amorphous)	7631-86-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	36.0	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	470	2.8E-05	4.2E-07	--	--	3.2E-06	2.8E-07	--	2.5E-05	2.5E-05	2.5E-05	1.9E-05
Acetone	67-64-1	Yes	62,000	2.7E-07	5.9E-09	--	--	1.8E-08	--	--	1.2E-07	1.2E-07	1.2E-07	9.1E-08
Acrolein	107-02-8	Yes	6.90	8.7E-04	2.6E-05	--	--	1.7E-05	8.1E-07	--	--	--	--	--
Ammonia	7664-41-7	Yes	1,200	--	--	--	--	--	1.1E-07	--	--	--	--	--
Benzene	71-43-2	Yes	29.0	7.1E-04	2.3E-05	--	--	1.8E-06	1.1E-06	3.1E-06	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	1,900	1.1E-07	3.6E-09	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	170	9.7E-05	3.2E-06	--	--	--	--	--	--	--	--	--
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Sodium Hydroxide	1310-73-2	Yes	8.00	--	--	--	--	--	--	--	--	--	--	--
Sulfuric Acid	7664-93-9	Yes	120	--	--	4.5E-07	4.5E-07	--	--	--	--	--	--	--
Vanadium Pentoxide	1314-62-1	Yes	30.0	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	490	8.5E-07	2.8E-08	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	230	1.5E-06	5.1E-08	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	22,000	1.2E-08	3.8E-10	--	--	--	8.2E-11	1.0E-09	--	--	--	--
Formaldehyde	50-00-0	Yes	49.0	5.7E-04	1.5E-05	--	--	2.5E-05	5.8E-06	--	--	--	--	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	3,200	2.9E-05	9.8E-07	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	28,000	1.2E-06	1.8E-08	--	--	1.2E-07	--	--	6.6E-07	6.6E-07	6.6E-07	4.9E-07
1,3,5-Trimethylbenzene	108-67-8	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Fluorides	239	Yes	240	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	3,900	6.0E-08	2.0E-09	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	1,000	9.0E-07	3.0E-08	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	660	--	--	--	--	--	5.4E-08	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	11,000	1.1E-07	3.6E-09	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	2,100	3.9E-06	1.3E-07	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	5,000	2.9E-08	9.7E-10	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	5,800	8.3E-07	1.9E-08	--	--	5.2E-08	--	--	--	--	--	--
Propylene	115-07-1	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	21,000	4.6E-07	1.5E-08	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	7,500	9.6E-08	1.1E-09	--	--	1.3E-08	2.3E-09	2.9E-08	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	8,700	5.0E-08	4.2E-10	--	--	7.6E-09	8.1E-10	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	1,300	2.9E-07	9.8E-09	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	2.10	2.0E-04	6.6E-06	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	8,700	--	--	--	--	--	--	5.0E-09	--	--	--	--
p-Xylene	106-42-3	Yes	8,700	--	--	--	--	--	--	2.2E-09	--	--	--	--
o-Xylene	95-47-6	Yes	8,700	--	--	--	--	--	--	2.3E-09	--	--	--	--
Hydrogen fluoride	7664-39-3	Yes	16.0	1.2E-04	3.9E-06	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	2,100	4.3E-05	1.4E-06	--	--	--	1.5E-08	--	--	--	--	--
DPM	200	No	[3]	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	401	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	2.0E-03	0.023	7.7E-04	--	--	--	2.9E-06	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	200	1.0E-05	3.5E-07	--	--	--	1.6E-08	4.9E-10	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	No	[3]	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	No	[3]	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	No	[3]	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	No	[3]	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	340	1.3E-06	4.2E-08	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	No	[3]	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	12,000	4.8E-07	1.6E-08	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	No	[3]	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	41.0	1.2E-05	4.2E-07	--	--	--	--	--	--	--	--	--
TEU Risk Equivalent Emission Rate [b] (g/s per ug/m³)				**0.034**	**5.5E-03**	**4.5E-07**	**4.5E-07**	**4.7E-05**	**3.6E-05**	**3.1E-06**	**2.6E-05**	**2.6E-05**	**2.6E-05**	**1.9E-05**

Notes

g/s = grams per second; TAC = toxic air contaminant; RBC = Risk-based concentration;

ug/m³ = micrograms per cubic meter; TEU = toxic emission unit.

[a] TAC acute risk equivalent emission rate (g/s per ug/m³) = (daily emissions estimate [g/s])
/ (acute risk based concentration [ug/m³])

Daily emissions estimate (g/s) = (2)

[b] TEU Risk Equivalent Emission Rate (g/s per ug/m³) = ∑ (TAC acute risk equivalent emission rates [g/s per ug/m³])

References

[1] Oregon Administrative Rule 340-245-8010 Table 2.

[2] See Table 2-2, Proposed Daily TAC Emission Rates (Significant TEUs).

[3] TAC does not have an acute based concentration listed in OAR 340-245-8010 Table 2.

Table 2-3 (Cont.)
Proposed Acute Risk Equivalent Emission Rates (Significant TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

Toxic Air Contaminant	CAS or DEQ ID	Acute RBC (Yes/No)	Acute RBC [1] (ug/m³)	Acute Risk Equivalent Emission Rate [a] (g/s per ug/m³)									
				Steam Tunnel 2 Throughput	Steam Tunnel 2 Throughput	Steam Tunnel 2 Throughput	Plant 1 Welding Emissions	Plant 1 Material Balance Emissions	Plant 2 Welding Emissions	Plant 2 Material Balance Emissions	Total Plant 4 Fugitive Emissions	Total Cat Shop Fugitive Emissions	Total Fab Shop Fugitive Emissions
Model ID	--	--	--	TUNS2B	TUNS2C	TUNS2D	WELD_P1	MB_P1	WELD_P2	MB_P2	FUG_P4	CAT_SHOP	FAB_SHOP
Antimony and compounds	7440-36-0	Yes	1.00	--	--	--	--	--	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	0.20	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	0.020	--	--	--	--	--	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	0.030	--	--	--	--	--	--	--	--	--	--
Chromium VI (particulate)	18540-29-9	Yes	0.30	--	--	--	1.5E-07	--	--	--	--	2.0E-08	1.7E-07
Cobalt and compounds	7440-48-4	No	[3]	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	No	[3]	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	100.0	--	--	--	--	--	1.8E-10	--	--	5.5E-10	2.0E-09
Lead and compounds	7439-92-1	Yes	0.15	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	0.30	--	--	--	3.8E-06	--	2.3E-06	--	2.1E-06	2.9E-06	4.8E-06
Mercury and compounds	7439-97-6	Yes	0.60	--	--	--	--	--	--	--	--	--	--
Nickel and compounds (Insoluble)	365	Yes	0.20	--	--	--	--	--	--	--	--	2.3E-07	5.2E-06
Selenium and compounds	7782-49-2	Yes	2.00	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.80	--	--	--	--	--	--	--	--	--	--
Silicon dioxide (amorphous)	7631-86-9	No	[3]	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	No	[3]	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	No	[3]	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene	542-75-6	Yes	36.0	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	470	1.9E-05	1.9E-05	1.9E-05	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	62,000	9.1E-08	9.1E-08	9.1E-08	--	5.6E-07	--	5.6E-07	5.6E-07	4.2E-10	4.2E-10
Acrolein	107-02-8	Yes	6.90	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	1,200	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	29.0	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	1,900	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	170	--	--	--	--	--	--	--	--	--	--
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	No	[3]	--	--	--	--	--	--	--	--	--	--
Sodium Hydroxide	1310-73-2	Yes	8.00	--	--	--	--	--	--	--	7.2E-05	--	--
Sulfuric Acid	7664-93-9	Yes	120	--	--	--	--	--	--	--	--	--	--
Vanadium Pentoxide	1314-62-1	Yes	30.0	--	--	--	--	--	--	--	--	1.1E-10	--
Chlorobenzene	108-90-7	No	[3]	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	490	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	230	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	[3]	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	[3]	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	22,000	--	--	--	--	3.3E-09	--	3.3E-09	3.3E-09	1.3E-11	1.3E-11
Formaldehyde	50-00-0	Yes	49.0	--	--	--	--	--	--	--	--	--	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	[3]	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	No	[3]	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	No	[3]	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	3,200	--	--	--	--	--	--	--	3.1E-07	--	--
Methanol	67-56-1	Yes	28,000	4.9E-07	4.9E-07	4.9E-07	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	No	[3]	--	--	--	--	--	--	--	--	--	--
Fluorides	239	Yes	240	--	--	--	1.6E-08	--	8.6E-09	--	3.8E-09	9.4E-09	8.6E-09
1,2,3-Trimethylbenzene	526-73-8	No	[3]	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	No	[3]	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	3,900	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	1,000	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	660	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	11,000	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	No	[3]	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	2,100	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	5,000	--	--	--	--	--	--	--	1.6E-08	1.6E-08	1.6E-08
Phenol	108-95-2	Yes	5,800	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	No	[3]	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	No	[3]	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	21,000	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	7,500	--	--	--	--	1.8E-06	--	1.8E-06	1.8E-06	--	--
Xylene (mixture)	1330-20-7	Yes	8,700	--	--	--	--	2.3E-08	--	2.3E-08	2.3E-08	1.1E-10	1.1E-10
Vinyl Chloride	75-01-4	Yes	1,300	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	2.10	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	8,700	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	8,700	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	8,700	--	--	--	--	--	--	--	--	--	--
Hydrogen fluoride	7664-39-3	Yes	16.0	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	2,100	--	--	--	--	--	--	--	--	--	--
DPM	200	No	[3]	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	401	No	[3]	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	No	[3]	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	2.0E-03	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	No	[3]	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	No	[3]	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	No	[3]	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	No	[3]	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	No	[3]	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	No	[3]	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	No	[3]	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	200	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	No	[3]	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	No	[3]	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	No	[3]	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	No	[3]	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	No	[3]	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	No	[3]	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	No	[3]	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	No	[3]	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	No	[3]	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	No	[3]	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	340	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	No	[3]	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	12,000	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	No	[3]	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	No	[3]	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	41.0	--	--	--	--	--	--	--	--	--	--
TEU Risk Equivalent Emission Rate [b] (g/s per ug/m³)				**1.9E-05**	**1.9E-05**	**1.9E-05**	**4.0E-06**	**2.4E-06**	**2.4E-06**	**2.4E-06**	**7.7E-05**	**3.2E-06**	**1.0E-05**

Notes

g/s = grams per second; TAC = toxic air contaminant; RBC = Risk-based concentration;

ug/m³ = micrograms per cubic meter; TEU = toxic emission unit.

[a] TAC acute risk equivalent emission rate (g/s per ug/m³) = (daily emissions estimate [g/s])
/ (acute risk based concentration [ug/m³])

Daily emissions estimate (g/s) = (2)

[b] TEU Risk Equivalent Emission Rate (g/s per ug/m³) = ∑ (TAC acute risk equivalent emission rates [g/s per ug/m

References

[1] Oregon Administrative Rule 340-245-8010 Table 2.

[2] See Table 2-2, Proposed Daily TAC Emission Rates (Significant TEUs).

[3] TAC does not have an acute based concentration listed in OAR 340-245-8010 Table 2.

Table 2-4
Proposed Annual TAC Emission Rates (Gas-Exempt TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Gas Exempt TEUs [1]											
			Natural Gas Combustion in Dryer Auxiliary Burners		Total NG Emissions Through Boiler 3 Exhaust		Natural Gas Combustion in Dryer Auxiliary Burners (Fugitives)		Total Fugitive NG Emissions Heating		Propane Combustion in Emergency Engine		Propane Combustion in Boiler 2	
TEU ID			VD1_NG	VD2_NG	--		VD1_NG-FUG	VD2_NG-FUG	--		EGEN		BLR2	
Dispersion Model ID			--		BLR3_NG		--		DRY_FUG_NG					
Emission Rate Units			(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]	(lb/yr)	(lb/yr)	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]	(lb/yr)	(g/s) [a]
METALS														
Arsenic and Compounds	7440-38-2	Yes	0.049	0.049	0.097	1.4E-06	9.9E-04	9.9E-04	2.0E-03	2.9E-08	--	--	--	--
Barium and Compounds	7440-39-3	No	1.07	1.07	2.14	3.1E-05	0.022	0.022	0.044	6.3E-07	--	--	--	--
Beryllium and Compounds	7440-41-7	Yes	2.9E-03	2.9E-03	5.8E-03	8.4E-08	6.0E-05	6.0E-05	1.2E-04	1.7E-09	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	0.27	0.27	0.54	7.7E-06	5.5E-03	5.5E-03	0.011	1.6E-07	--	--	--	--
Chromium VI	18540-29-9	Yes	0.34	0.34	0.68	9.8E-06	7.0E-03	7.0E-03	0.014	2.0E-07	--	--	--	--
Cobalt and Compounds	7440-48-4	Yes	0.020	0.020	0.041	5.9E-07	4.2E-04	4.2E-04	8.3E-04	1.2E-08	--	--	--	--
Copper and Compounds	7440-50-8	Yes	0.21	0.21	0.41	6.0E-06	4.2E-03	4.2E-03	8.4E-03	1.2E-07	--	--	--	--
Lead and Compounds	7439-92-1	Yes	0.12	0.12	0.24	3.5E-06	2.5E-03	2.5E-03	5.0E-03	7.1E-08	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	0.093	0.093	0.19	2.7E-06	1.9E-03	1.9E-03	3.8E-03	5.4E-08	--	--	--	--
Mercury and Compounds	7439-97-6	Yes	0.063	0.063	0.13	1.8E-06	1.3E-03	1.3E-03	2.6E-03	3.7E-08	--	--	--	--
Molybdenum trioxide	1313-27-5	No	0.40	0.40	0.80	1.2E-05	8.2E-03	8.2E-03	0.016	2.4E-07	--	--	--	--
Nickel	365	Yes	0.51	0.51	1.02	1.5E-05	0.010	0.010	0.021	3.0E-07	--	--	--	--
Selenium and Compounds	7782-49-2	Yes	5.8E-03	5.8E-03	0.012	1.7E-07	1.2E-04	1.2E-04	2.4E-04	3.4E-09	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.56	0.56	1.12	1.6E-05	0.011	0.011	0.023	3.3E-07	--	--	--	--
Zinc and Compounds	7440-66-6	No	7.06	7.06	14.1	2.0E-04	0.14	0.14	0.29	4.1E-06	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS														
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	1.4E-03	2.0E-08	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	8.6E-04	1.2E-08	--	--
1,2-Dichloropropane (propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	7.3E-04	1.1E-08	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	0.037	5.4E-07	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	7.1E-04	1.0E-08	--	--
Acetaldehyde	75-07-0	Yes	0.10	0.10	0.21	3.0E-06	0.021	0.021	0.043	6.1E-07	0.16	2.2E-06	0.050	7.2E-07
Acrolein	107-02-8	Yes	0.066	0.066	0.13	1.9E-06	0.013	0.013	0.027	3.9E-07	0.15	2.1E-06	0.043	6.2E-07
Ammonia	7664-41-7	Yes	77.9	77.9	156	2.2E-03	15.9	15.9	31.8	4.6E-04	0.19	2.7E-06	54.0	7.8E-04
Benzene	71-43-2	Yes	0.19	0.19	0.39	5.6E-06	0.040	0.040	0.080	1.1E-06	0.089	1.3E-06	0.092	1.3E-06
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	9.9E-04	1.4E-08	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	7.7E-04	1.1E-08	--	--
Dichloromethane (methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	2.3E-03	3.3E-08	--	--
Ethylbenzene	100-41-4	Yes	0.23	0.23	0.46	6.7E-06	0.047	0.047	0.094	1.4E-06	1.4E-03	2.0E-08	0.11	1.6E-06
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	1.2E-03	1.7E-08	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	6.3E-04	9.1E-09	--	--
Formaldehyde	50-00-0	Yes	0.41	0.41	0.83	1.2E-05	0.084	0.084	0.17	2.4E-06	1.15	1.7E-05	0.20	2.8E-06
Hexane	110-54-3	Yes	0.15	0.15	0.31	4.4E-06	0.031	0.031	0.063	9.0E-07	--	--	0.074	1.1E-06
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	0.17	2.5E-06	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	6.7E-04	9.6E-09	--	--
Vinyl chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	4.0E-04	5.8E-09	--	--
Toluene	108-88-3	Yes	0.89	0.89	1.78	2.6E-05	0.18	0.18	0.36	5.2E-06	0.031	4.5E-07	0.42	6.1E-06
Xylene (mixture)	1330-20-7	Yes	0.66	0.66	1.32	1.9E-05	0.14	0.14	0.27	3.9E-06	0.011	1.6E-07	0.32	4.5E-06
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)														
PAHs (excluding Naphthalene)	401	Yes	2.4E-03	2.4E-03	4.9E-03	7.0E-08	5.0E-04	5.0E-04	9.9E-04	1.4E-08	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	2.9E-05	2.9E-05	5.8E-05	8.4E-10	6.0E-06	6.0E-06	1.2E-05	1.7E-10	--	--	1.8E-03	2.6E-08
Naphthalene	91-20-3	Yes	7.3E-03	7.3E-03	0.015	2.1E-07	1.5E-03	1.5E-03	3.0E-03	4.3E-08	5.4E-03	7.8E-08	5.4E-03	7.8E-08
Total TAC Emission Estimate			**91.4**	**91.4**	**183**	**2.6E-03**	**16.7**	**16.7**	**33.4**	**4.8E-04**	**2.00**	**2.9E-05**	**55.3**	**8.0E-04**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) x (yr/8,760 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-5
Proposed Daily TAC Emission Rates (Gas-Exempt TEUs)
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS/DEQ ID	RBC? (Yes/No)	Gas Exempt TEUs [1]											
			Natural Gas Combustion in Dryer Auxiliary Burners		Total NG Emissions Through Boiler 3 Exhaust		Natural Gas Combustion in Dryer Auxiliary Burners (Fugitives)		Total Fugitive NG Emissions Heating		Propane Combustion in Emergency Engine		Propane Combustion in Boiler 2	
TEU ID			VD1_NG	VD2_NG	--		VD1_NG-FUG	VD2_NG-FUG	--		EGEN		BLR2	
Dispersion Model ID			--		BLR3_NG		--		DRY_FUG_NG					
Emission Rate Units			(lb/day)	(lb/day)	(lb/day)	(g/s) [a]	(lb/day)	(lb/day)	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]	(lb/day)	(g/s) [a]
METALS														
Arsenic and Compounds	7440-38-2	Yes	1.3E-04	1.3E-04	2.7E-04	1.4E-06	2.7E-06	2.7E-06	5.4E-06	2.9E-08	--	--	--	--
Barium and Compounds	7440-39-3	No	2.9E-03	2.9E-03	5.9E-03	3.1E-05	6.0E-05	6.0E-05	1.2E-04	6.3E-07	--	--	--	--
Beryllium and Compounds	7440-41-7	Yes	8.0E-06	8.0E-06	1.6E-05	8.4E-08	1.6E-07	1.6E-07	3.3E-07	1.7E-09	--	--	--	--
Cadmium and Compounds	7440-43-9	Yes	7.3E-04	7.3E-04	1.5E-03	7.7E-06	1.5E-05	1.5E-05	3.0E-05	1.6E-07	--	--	--	--
Chromium VI	18540-29-9	Yes	9.3E-04	9.3E-04	1.9E-03	9.8E-06	1.9E-05	1.9E-05	3.8E-05	2.0E-07	--	--	--	--
Cobalt and Compounds	7440-48-4	Yes	5.6E-05	5.6E-05	1.1E-04	5.9E-07	1.1E-06	1.1E-06	2.3E-06	1.2E-08	--	--	--	--
Copper and Compounds	7440-50-8	Yes	5.7E-04	5.7E-04	1.1E-03	5.9E-06	1.2E-05	1.2E-05	2.3E-05	1.2E-07	--	--	--	--
Lead and Compounds	7439-92-1	Yes	3.3E-04	3.3E-04	6.7E-04	3.5E-06	6.8E-06	6.8E-06	1.4E-05	7.1E-08	--	--	--	--
Manganese and Compounds	7439-96-5	Yes	2.5E-04	2.5E-04	5.1E-04	2.7E-06	5.2E-06	5.2E-06	1.0E-05	5.4E-08	--	--	--	--
Mercury and Compounds	7439-97-6	Yes	1.7E-04	1.7E-04	3.5E-04	1.8E-06	3.5E-06	3.5E-06	7.1E-06	3.7E-08	--	--	--	--
Molybdenum trioxide	1313-27-5	No	1.1E-03	1.1E-03	2.2E-03	1.2E-05	2.2E-05	2.2E-05	4.5E-05	2.4E-07	--	--	--	--
Nickel	365	Yes	1.4E-03	1.4E-03	2.8E-03	1.5E-05	2.9E-05	2.9E-05	5.7E-05	3.0E-07	--	--	--	--
Selenium and Compounds	7782-49-2	Yes	1.6E-05	1.6E-05	3.2E-05	1.7E-07	3.3E-07	3.3E-07	6.5E-07	3.4E-09	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	1.5E-03	1.5E-03	3.1E-03	1.6E-05	3.1E-05	3.1E-05	6.3E-05	3.3E-07	--	--	--	--
Zinc and Compounds	7440-66-6	No	0.019	0.019	0.039	2.0E-04	3.9E-04	3.9E-04	7.9E-04	4.1E-06	--	--	--	--
SPECIATED ORGANIC/INORGANIC COMPOUNDS														
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	--	--	--	--	--	--	--	4.3E-05	2.2E-07	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	--	--	--	--	--	--	--	2.6E-05	1.3E-07	--	--
1,2-Dichloropropane (propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	2.2E-05	1.2E-07	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	1.1E-03	5.9E-06	--	--
1,3-Dichloropropene	542-75-6	Yes	--	--	--	--	--	--	--	--	2.1E-05	1.1E-07	--	--
Acetaldehyde	75-07-0	Yes	2.9E-04	2.9E-04	5.7E-04	3.0E-06	5.8E-05	5.8E-05	1.2E-04	6.1E-07	4.7E-03	2.5E-05	9.4E-04	4.9E-06
Acrolein	107-02-8	Yes	1.8E-04	1.8E-04	3.6E-04	1.9E-06	3.7E-05	3.7E-05	7.3E-05	3.9E-07	4.4E-03	2.3E-05	8.0E-04	4.2E-06
Ammonia	7664-41-7	Yes	0.21	0.21	0.43	2.2E-03	0.044	0.044	0.087	4.6E-04	5.6E-03	2.9E-05	1.01	5.3E-03
Benzene	71-43-2	Yes	5.3E-04	5.3E-04	1.1E-03	5.6E-06	1.1E-04	1.1E-04	2.2E-04	1.1E-06	2.7E-03	1.4E-05	1.7E-03	9.0E-06
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	3.0E-05	1.6E-07	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	2.3E-05	1.2E-07	--	--
Dichloromethane (methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	6.9E-05	3.6E-07	--	--
Ethylbenzene	100-41-4	Yes	6.3E-04	6.3E-04	1.3E-03	6.6E-06	1.3E-04	1.3E-04	2.6E-04	1.4E-06	4.2E-05	2.2E-07	2.0E-03	1.1E-05
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	--	--	--	--	--	--	--	--	3.6E-05	1.9E-07	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	1.9E-05	1.0E-07	--	--
Formaldehyde	50-00-0	Yes	1.1E-03	1.1E-03	2.3E-03	1.2E-05	2.3E-04	2.3E-04	4.6E-04	2.4E-06	0.035	1.8E-04	3.7E-03	1.9E-05
Hexane	110-54-3	Yes	4.2E-04	4.2E-04	8.4E-04	4.4E-06	8.6E-05	8.6E-05	1.7E-04	9.0E-07	--	--	1.4E-03	7.2E-06
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	5.2E-03	2.7E-05	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	2.0E-05	1.1E-07	--	--
Vinyl chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	1.2E-05	6.3E-08	--	--
Toluene	108-88-3	Yes	2.4E-03	2.4E-03	4.9E-03	2.6E-05	5.0E-04	5.0E-04	1.0E-03	5.2E-06	9.4E-04	4.9E-06	7.9E-03	4.1E-05
Xylene (mixture)	1330-20-7	Yes	1.8E-03	1.8E-03	3.6E-03	1.9E-05	3.7E-04	3.7E-04	7.4E-04	3.9E-06	3.3E-04	1.7E-06	5.9E-03	3.1E-05
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)														
PAHs (excluding Naphthalene)	401	Yes	6.7E-06	6.7E-06	1.3E-05	7.0E-08	1.4E-06	1.4E-06	2.7E-06	1.4E-08	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	8.0E-08	8.0E-08	1.6E-07	8.4E-10	1.6E-08	1.6E-08	3.3E-08	1.7E-10	--	--	3.4E-05	1.8E-07
Naphthalene	91-20-3	Yes	2.0E-05	2.0E-05	4.0E-05	2.1E-07	4.1E-06	4.1E-06	8.2E-06	4.3E-08	1.6E-04	8.6E-07	1.0E-04	5.3E-07
Total TAC Emission Estimate			**0.25**	**0.25**	**0.50**	**2.6E-03**	**0.046**	**0.046**	**0.091**	**4.8E-04**	**0.060**	**3.2E-04**	**1.03**	**5.4E-03**

Notes

g = gram, hr = hour; lb = pound; RBC = risk-based concentration.

s = second; TAC = toxic air contaminant; TEU = toxic emission unit.

[a] Emission rate (g/s) = (daily emissions estimate [lb/day]) x (453.592 g/lb) x (day/24 hrs) x (hr/3,600 s)

References

[1] See the TAC emissions inventory approved by DEQ on December 12, 2025.

Table 2-6
Proposed Model Release Parameters
Freres Lumber Company, Inc.—Lyons, Oregon

Point Sources										
Model ID	Model Source Description	UTM Coordinates [1]		Stack Orientation [1]	Base Elevation [2] (m)	Release Height [1] (m)	Stack Diameter [1] (m)	Exit Velocity [1] (m/s)	Exit Flowrate [a] (m^3/s)	Exit Temperature [1] (K)
		Easting	Northing							
Significant TEUs										
BLR3	Wood Fuel Combustion in Boiler 3	530,684	4,957,581	Vertical	207	22.6	2.11	11.0	38.3	477
BLR3_SU	Wood Fuel Combustion in Boiler 3 During Startup	530,684	4,957,581	Vertical	207	22.6	2.11	11.0	38.3	394
CT01	Cooling Tower Cell 1	530,686	4,957,522	Vertical	206	11.6	7.32	1.82	76.3	Ambient
CT02	Cooling Tower Cell 2	530,696	4,957,517	Vertical	206	11.6	7.32	1.82	76.3	Ambient
FIRE	Emergency Diesel Generator Fire Pump	531,278	4,957,458	Horizontal	209	2.13	0.18	24.8	0.62	788
Gas Exempt TEUs										
BLR3_NG	Dryer NG Combustion through BLR3 (Gas Exempt)	530,684	4,957,581	Vertical	207	22.6	2.11	11.0	38.3	477
EGEN_P	Propane Emergency Engine (Gas Exempt)	531,054	4,957,663	Capped	207	1.52	0.30	8.44	0.62	788
BLR2	Propane Combustion in Boiler 2 (Gas Exempt)	530,765	4,957,551	Vertical	207	6.71	1.10	2.98	2.83	464

Discrete Volume Sources										
Model ID	Model Source Description	UTM Coordinates [1]		On or Adjacent to a Building?	Base Elevation [2] (m)	Adjacent Building Height (m)	Release Height (m)	Length of Side (m)	Initial Lateral Dimension [b] (m)	Initial Vertical Dimension (m)
		Easting	Northing							
Significant TEUs										
DRY_FUG	Veneer Dryer Fugitives	530,619	4,957,590	Yes	206	7.92 [4]	3.96 [5]	20.9 [7]	4.85	3.69 [c]
GDF	Gasoline Dispensing	531,236	4,957,509	No	209	--	3.00 [6]	3.50 [7]	0.81	0.70 [d]
TUNS1A	Steam Tunnel 1(Assumes 1/3 throughput of TUNS1)	530,761	4,957,624	Yes	207	7.32 [4]	3.66 [5]	8.38 [7]	1.95	3.40 [c]
TUNS1B	Steam Tunnel 1 (Assumes 1/3 throughput of TUNS1)	530,771	4,957,623	Yes	207	7.32 [4]	3.66 [5]	8.38 [7]	1.95	3.40 [c]
TUNS1C	Steam Tunnel 1 (Assumes 1/3 throughput of TUNS1)	530,781	4,957,622	Yes	207	7.32 [4]	3.66 [5]	8.38 [7]	1.95	3.40 [c]
TUNS2A	Steam Tunnel 2 (Assumes 1/4 throughput of TUNS2)	531,033	4,957,540	Yes	208	7.32 [4]	3.66 [5]	8.38 [7]	1.95	3.40 [c]
TUNS2B	Steam Tunnel 2 (Assumes 1/4 throughput of TUNS2)	531,041	4,957,532	Yes	208	7.32 [4]	3.66 [5]	8.38 [7]	1.95	3.40 [c]
TUNS2C	Steam Tunnel 2 (Assumes 1/4 throughput of TUNS2)	531,048	4,957,524	Yes	208	7.32 [4]	3.66 [5]	8.38 [7]	1.95	3.40 [c]
TUNS2D	Steam Tunnel 2 (Assumes 1/4 throughput of TUNS2)	531,056	4,957,516	Yes	208	7.32 [4]	3.66 [5]	8.38 [8]	1.95	3.40 [c]
CAT_MB	Fugitive Welding Emissions Cat Shop	531,176	4,957,517	Yes	208	7.62 [4]	3.81 [5]	27.2 [8]	6.32	3.68 [c]
FAB_MB	Fugitive Welding Emissions Fab Shop	531,228	4,957,477	Yes	208	10.1 [4]	5.03 [5]	30.8 [9]	7.15	4.68 [c]
FUG_P4	Plant 4 Fugitives (Welding/Paint)	530,561	4,957,608	Yes	206	7.93 [4]	3.96 [5]	13.0 [9]	3.02	3.69 [c]
MB_P2	Material Balance Emissions at Plant 2	531,051	4,957,589	Yes	208	10.7 [4]	5.33 [5]	19.8 [8]	4.61	4.96 [c]
WELD_P2	Fugitive Welding Emissions Plant 1	531,140	4,957,523	Yes	208	7.62 [4]	3.81 [5]	10.3 [9]	2.40	3.54 [c]
WELD_P1	Fugitive Welding Emissions Plant 2	530,763	4,957,565	Yes	207	9.75 [4]	4.88 [5]	6.30 [9]	1.47	4.54 [c]
MB_P1	Material Balance Emissions Plant 1	530,641	4,957,660	Yes	206	10.7 [4]	5.33 [5]	10.8 [9]	2.52	4.96 [c]
Gas Exempt TEUs										
DRY_FUG_NG	Dryer NG Combustion Fugitives (Gas Exempt)	530,619	4,957,590	No	206	7.92 [4]	3.96 [5]	20.9 [7]	4.85	3.69 [c]

Notes

K = Kelvin; m = meter; m/s = meters per second; m^3/s = cubic meters per second; UTM = Universal Transverse Mercator;.

[a] Exit flowrate (m^3/s) = (π/4) x (stack diameter [m])^2 x (exit velocity [m/s])

[b] Initial lateral dimension (m) = (length of side [m] / (4.3)

[c] Initial vertical dimension (m) = (building height [m] / (2.15)

[d] Initial vertical dimension (m) = (vertical dimension [m] / (4.3)

References

[1] Value based on information provided by Freres Lumber Co.

[2] Base elevation derived from the US Geological Survey National Elevation Dataset downloaded and processed in AERMET.

[3] See "User's Guide for the AMS/EPA Regulatory Model (AERMOD)" dated November 2024.

[4] Building height obtained from either Google Earth or from Freres Lumber Co.

[5] See "Users Guide for the AMS/EPA Regulatory Model (AERMOD)," EPA-454/B-18-001 dated April 2018. Assumes release height for elevated volume source is half of the building height.

[6] Release height estimated using Google Earth.

[7] Length of side estimated using Google Earth.

[8] Length of side estimated using Google Earth. Set to approximate footprint of building.

[9] Length of side estimated using Google Earth. Set to width of bay door opening nearest the source.

Table 3-3
Assessment of Missing Meteorological Data
Freres Lumber Company, Inc.—Lyons, Oregon

Quarter	Meteorological Data Assessment per Year							
	2023				2024			
	Total Hours	Missing Hours [1]	Available [a] (%)	Percent Calm Winds [1] (%)	Total Hours	Missing Hours [1]	Available [a] (%)	Percent Calm Winds [1] (%)
Preprocessed AERMOD Surface File using Lyons East Station (PC157) [2]								
Q1	2,160	38	98.2%	1.30%	2,184	20	99.1%	1.24%
Q2	2,184	16	99.3%	2.70%	2,184	125	94.3%	0.64%
Q3	2,208	3	99.9%	0.45%	2,208	83	96.2%	1.49%
Q4	2,208	6	99.7%	1.36%	2,208	37	98.3%	3.03%
Preprocessed AERMOD Surface File using Mill City Station (PC142) [3]								
Q1	2,160	38	98.2%	1.20%	2,184	20	99.1%	0.37%
Q2	2,184	16	99.3%	1.56%	2,184	124	94.3%	0.46%
Q3	2,208	2	99.9%	0.45%	2,208	83	96.2%	1.04%
Q4	2,208	6	99.7%	1.13%	2,208	39	98.2%	1.99%

Notes

[a] Available hours (%) = (1 - [{missing hours} / {total hours}]) x (100)

References

[1] The number of missing and percent calm hours were determined by generating a SFC QA excel file generated by AERMET version 24142. Note that the missing hours are primarily a result of missing cloud cover data from the Salem McNary Airport used as the Surface meteorological dataset.

[2] Meteorological data obtained from the MesoWest/Synoptic PBC Data Archive for the Lyons East (PC157) station in Lyons, Oregon and from the NOAA NCEI ISD for the Salem McNary Airport located in Salem, Oregon (WBAN: 24232).

[3] Meteorological data obtained from the MesoWest/Synoptic PBC Data Archive for the Mill City (PC142) station in Mills City, Oregon and from the NOAA NCEI ISD for the Salem McNary Airport located in Salem, Oregon (WBAN: 24232).

Table 3-6
Surface Soil Moisture Condition Assessment
Freres Lumber Company, Inc.—Lyons, Oregon

30-Year Climate Precipitation Data		Annual Precipitation (in)	
		Site-Specific [1]	Surface [2]
Average Annual Precipitation	[3]	52.4	40.8
Lower 30th Percentile Annual Precipitation	[4]	46.8	35.3
Upper 70th Percentile Annual Precipitation	[5]	57.0	46.1

Calendar Year	Total Precipitation (in)	Climatic Significance [6] (in)	Calendar Year Soil Moisture [7] (in)
Site-Specific			
2023	45.3 [1]	Lower 30th Percentile	DRY
2024	54.8 [1]	Middle 40th Percentile	AVG
Surface			
2023	36.7 [2]	Middle 40th Percentile	AVG
2024	44.6 [2]	Middle 40th Percentile	AVG

References

[1] Annual precipitation data obtained from the Western Regional Climate Center for the Stayton, Oregon monitoring station (ID 358095). Representative of the most current 30-year period between 1995 - 2024.

[2] Annual precipitation data obtained from the Western Regional Climate Center for the Salem McNary Airport monitoring station (ID 726940-24332). Representative of the most current 30-year period between 1995 - 2024.

[3] Represents average annual precipitation during the 30-year climatological record.

[4] Represents lower limit of middle 40th percentile annual precipitation during 30-year climatological record.

[5] Represents upper limit of middle 40th percentile annual precipitation during 30-year climatological record.

[6] Climatic significance determined by comparing the annual precipitation data to the 30-year climatological record.

[7] Dry, average, or wet surface soil moisture conditions determined by comparing the annual precipitation data to the 30-year climatological record. This determination is consistent with the methodology presented in the current version of the US EPA "User's Guide for AERSURFACE Tool" document (EPA-454/B-20-008) dated February 29, 2020.

Table 3-7
Summary of Downwash Structure Heights
Freres Lumber Company, Inc.—Lyons, Oregon

Downwash Structure Model ID	Base Elevation [1]		Number of Building Tiers	Tier Height [2]	
	(ft)	(m)		(ft)	(m)
BLD_1	675.7	206.0	1	33.0	10.1
BLD_2	676.6	206.2	1	26.0	7.9
BLD_6	679.3	207.0	1	27.0	8.2
BLD_12	682.0	207.9	1	27.0	8.2
BLD_3	678.8	206.9	1	35.0	10.7
BLD_4	679.3	207.1	1	33.0	10.1
STOR	680.1	207.3	1	48.0	14.6
BLR_BLD	680.1	207.3	1	16.0	4.9
BLR_BLD	680.1	207.3	2	16.0	4.9
COOLINGTOWER	676.0	206.0	1	38.0	11.6
SILO	679.7	207.2	1	78.0	23.8
SILO2	680.1	207.3	1	78.0	23.8
FIRE_BLD	683.9	208.5	1	12.0	3.7
BLD_15	684.3	208.6	1	20.0	6.1
FAB_SHOP	683.4	208.3	1	33.0	10.1
VAT 1	679.8	207.2	1	24.0	7.3
BLD_18	678.9	206.9	1	26.0	7.9
BLD_17	679.0	207.0	1	32.0	9.8
BLD_19	680.5	207.4	1	25.0	7.6
OFFICE	678.6	206.8	1	15.0	4.6

References

[1] Base elevation derived from 1/3-arc second US Geological Survey National Elevation Dataset.

[2] Information provided by Freres Lumber Co. or obtained using Google Earth.

Table 4-1
Applicable Risk-Based Concentrations
Freres Lumber Company, Inc.—Lyons, Oregon

TAC	CAS or DEQ ID	RBC? (Yes/No)	Noncancer TBACT RAL [1]	Risk-Based Concentration [1] (ug/m^3)						
				Residential Chronic		Non-Residential Chronic				Acute
				Cancer	Noncancer	Child Cancer	Child Noncancer	Worker Cancer	Worker Noncancer	Noncancer
Antimony and compounds	7440-36-0	Yes	HI3	--	0.30	--	1.30	--	1.30	1.00
Arsenic and compounds	7440-38-2	Yes	HI3	2.4E-05	1.7E-04	1.3E-03	2.4E-03	6.2E-04	2.4E-03	0.20
Beryllium and compounds	7440-41-7	Yes	HI3	4.2E-04	7.0E-03	0.011	0.031	5.0E-03	0.031	0.020
Cadmium and compounds	7440-43-9	Yes	HI3	5.6E-04	5.0E-03	0.014	0.037	6.7E-03	0.037	0.030
Chromium VI (particulate)	18540-29-9	Yes	HI3	3.1E-05	0.083	5.2E-04	0.88	1.0E-03	0.88	0.30
Cobalt and compounds	7440-48-4	Yes	HI3	--	0.10	--	0.44	--	0.44	--
Aluminum and compounds	7429-90-5	Yes	HI5	--	5.00	--	22.0	--	22.0	--
Copper and compounds	7440-50-8	Yes	HI3	--	--	--	--	--	--	100
Lead and compounds	7439-92-1	Yes	HI3	--	0.15	--	0.66	--	0.66	0.15
Manganese and compounds	7439-96-5	Yes	HI3	--	0.090	--	0.40	--	0.40	0.30
Mercury and compounds	7439-97-6	Yes	HI3	--	0.077	--	0.63	--	0.63	0.60
Nickel and compounds (Insoluble)	365	Yes	HI3	3.8E-03	0.014	0.10	0.062	0.046	0.062	0.20
Selenium and compounds	7782-49-2	Yes	HI3	--	--	--	--	--	--	2.00
Vanadium (fume or dust)	7440-62-2	Yes	HI3	--	0.10	--	0.44	--	0.44	0.80
Silicon dioxide (amorphous)	7631-86-9	Yes	HI5	--	3.00	--	13.0	--	13.0	--
1,1,2,2-Tetrachloroethane	79-34-5	Yes	--	0.017	--	0.45	--	0.21	--	--
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	Yes	--	0.063	--	1.60	--	0.75	--	--
1,3-Dichloropropene	542-75-6	Yes	HI3	0.25	32.0	6.50	140	3.00	140	36.0
Acetaldehyde	75-07-0	Yes	HI3	0.45	140	12.0	620	5.50	620	470
Acetone	67-64-1	Yes	HI3	--	31,000	--	140,000	--	140,000	62,000
Acrolein	107-02-8	Yes	HI5	--	0.35	--	1.50	--	1.50	6.90
Ammonia	7664-41-7	Yes	HI3	--	500	--	2,200	--	2,200	1,200
Benzene	71-43-2	Yes	HI3	0.13	3.00	3.30	13.0	1.50	13.0	29.0
Carbon tetrachloride	56-23-5	Yes	HI3	0.17	100	4.30	440	2.00	440	1,900
Chlorine	7782-50-5	Yes	HI3	--	0.15	--	0.66	--	0.66	170
Ethylene dibromide (EDB, 1,2-dibromoethane)	106-93-4	Yes	HI3	1.7E-03	9.00	0.043	40.0	0.020	40.0	--
Sodium Hydroxide	1310-73-2	Yes	HI3	--	--	--	--	--	--	8.00
Sulfuric Acid	7664-93-9	Yes	HI5	--	1.00	--	4.40	--	4.40	120
Vanadium Pentoxide	1314-62-1	Yes	HI3	1.2E-04	7.0E-03	3.1E-03	0.031	1.4E-03	0.031	30.0
Chlorobenzene	108-90-7	Yes	HI3	--	50.0	--	220	--	220	--
Chloroform	67-66-3	Yes	HI3	--	300	--	1,300	--	1,300	490
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	HI3	--	4.00	--	18.0	--	18.0	230
3-Methylcholanthrene	56-49-5	Yes	--	1.6E-04	--	4.1E-03	--	1.9E-03	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	Yes	--	1.4E-05	--	3.7E-04	--	1.7E-04	--	--
Ethyl benzene	100-41-4	Yes	HI3	0.40	260	10.0	1,100	4.80	1,100	22,000
Formaldehyde	50-00-0	Yes	HI3	0.17	9.00	4.30	40.0	2.00	40.0	49.0
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	HI3	--	3,000	--	13,000	--	13,000	--
Isopropylbenzene (Cumene)	98-82-8	Yes	HI3	--	400	--	1,800	--	1,800	--
Hexane	110-54-3	Yes	HI3	--	700	--	3,100	--	3,100	--
Isopropyl alcohol	67-63-0	Yes	HI3	--	200	--	880	--	880	3,200
Methanol	67-56-1	Yes	HI3	--	4,000	--	18,000	--	18,000	28,000
1,3,5-Trimethylbenzene	108-67-8	Yes	HI3	--	60.0	--	260	--	260	--
Fluorides	239	Yes	HI3	--	2.30	--	20.0	--	20.0	240
1,2,3-Trimethylbenzene	526-73-8	Yes	HI3	--	60.0	--	260	--	260	--
Cyclohexane	110-82-7	Yes	HI3	--	6,000	--	26,000	--	26,000	--
Bromomethane (Methyl bromide)	74-83-9	Yes	HI3	--	5.00	--	22.0	--	22.0	3,900
Chloromethane (Methyl chloride)	74-87-3	Yes	HI3	--	90.0	--	400	--	400	1,000
1,3-Butadiene	106-99-0	Yes	HI3	0.033	2.00	0.86	8.80	0.40	8.80	660
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	HI3	--	5,000	--	22,000	--	22,000	11,000
1,2,4-Trimethyl benzene	95-63-6	Yes	HI3	--	60.0	--	260	--	260	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	HI3	59.0	600	620	2,600	1,200	2,600	2,100
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	HI3	--	5,000	--	22,000	--	22,000	5,000
Phenol	108-95-2	Yes	HI3	--	200	--	880	--	880	5,800
Propylene	115-07-1	Yes	HI5	--	3,000	--	13,000	--	13,000	--
Propionaldehyde	123-38-6	Yes	HI5	--	8.00	--	35.0	--	35.0	--
Styrene	100-42-5	Yes	HI3	--	1,000	--	4,400	--	4,400	21,000
Toluene	108-88-3	Yes	HI3	--	5,000	--	22,000	--	22,000	7,500
Xylene (mixture)	1330-20-7	Yes	HI3	--	220	--	970	--	970	8,700
Vinyl Chloride	75-01-4	Yes	HI3	0.11	100	0.22	440	2.70	440	1,300
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	HI3	0.20	2.10	3.50	9.20	2.90	9.20	2.10
m-Xylene	108-38-3	Yes	HI3	--	220	--	970	--	970	8,700
p-Xylene	106-42-3	Yes	HI3	--	220	--	970	--	970	8,700
o-Xylene	95-47-6	Yes	HI3	--	220	--	970	--	970	8,700
Hydrogen fluoride	7664-39-3	Yes	HI3	--	2.10	--	19.0	--	19.0	16.0
Hydrochloric acid	7647-01-0	Yes	HI3	--	20.0	--	88.0	--	88.0	2,100
DPM	200	Yes	HI3	0.10	5.00	2.60	22.0	1.20	22.0	--
PAHs (excluding Naphthalene)	401	Yes	--	4.3E-05	--	1.6E-03	--	3.0E-03	--	--
Benz[a]anthracene	56-55-3	Yes	--	2.1E-04	--	7.8E-03	--	0.015	--	--
Benzo[a]pyrene	50-32-8	Yes	HI3	4.3E-05	2.0E-03	1.6E-03	8.8E-03	3.0E-03	8.8E-03	2.0E-03
Benzo[b]fluoranthene	205-99-2	Yes	--	5.3E-05	--	2.0E-03	--	3.8E-03	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	--	4.7E-03	--	0.17	--	0.34	--	--
Benzo[j]fluoranthene	205-82-3	Yes	--	1.4E-04	--	5.2E-03	--	0.010	--	--
Benzo[k]fluoranthene	207-08-9	Yes	--	1.4E-03	--	0.052	--	0.10	--	--
Chrysene	218-01-9	Yes	--	4.3E-04	--	0.016	--	0.030	--	--
Fluoranthene	206-44-0	Yes	--	5.3E-04	--	0.020	--	0.038	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	6.1E-04	--	0.022	--	0.043	--	--
Naphthalene	91-20-3	Yes	HI3	0.029	3.70	0.76	16.0	0.35	16.0	200
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	HI3	1.0E-09	1.3E-07	9.0E-08	2.6E-05	4.2E-08	2.6E-05	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	HI3	1.0E-07	1.3E-05	9.0E-06	2.6E-03	4.2E-06	2.6E-03	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	HI3	3.4E-06	4.2E-04	3.0E-04	0.085	1.4E-04	0.085	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	HI3	3.4E-08	4.2E-06	3.0E-06	8.5E-04	1.4E-06	8.5E-04	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	HI3	3.4E-09	4.2E-07	3.0E-07	8.5E-05	1.4E-07	8.5E-05	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	HI3	1.0E-08	1.3E-06	9.0E-07	2.6E-04	4.2E-07	2.6E-04	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	HI3	1.0E-07	1.3E-05	9.0E-06	2.6E-03	4.2E-06	2.6E-03	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	HI3	1.0E-07	1.3E-05	9.0E-06	2.6E-03	4.2E-06	2.6E-03	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	HI3	3.4E-06	4.2E-04	3.0E-04	0.085	1.4E-04	0.085	--
Total PCBs	1336-36-3	Yes	--	5.3E-04	--	0.020	--	9.2E-03	--	--
2,4-Dinitrotoluene	121-14-2	Yes	--	0.011	--	0.29	--	0.13	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	0.080	--	11.0	--	5.00	--	--
Hydrogen cyanide	74-90-8	Yes	HI3	--	0.80	--	3.50	--	3.50	340
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	HI3	0.038	7.00	1.00	31.0	0.46	31.0	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	HI3	0.091	60.0	2.40	260	1.10	260	12,000
2,4,6-Trichlorophenol	88-06-2	Yes	--	0.050	--	1.30	--	0.60	--	--
Pentachlorophenol	87-86-5	Yes	--	0.20	--	5.10	--	2.40	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	HI3	3.80	41.0	100	180	46.0	180	41.0

Notes

TAC = toxic air contaminant; ug/m^3 = micrograms per cubic meter; RAL = risk action level; RBC = risk based concentration.

References

[1] See Oregon Administrative Rule 340-245-8010 Table 2.

Table 4-2
List of TACs with No Published Risk-Based Concentrations
Freres Lumber Company, Inc.—Lyons, Oregon

Toxic Air Contaminant	CAS or DEQ ID	Risk-Based Concentration? [1] (Yes/No)
2,2,4-Trimethylpentane	540-84-1	No
Acetophenone	98-86-2	No
Crotonaldehyde	4170-30-3	No
Diethylphthalate	84-66-2	No
Dibutyl phthalate	84-74-2	No
Dipropylene glycol monomethyl ether	34590-94-8	No
Isoprene	78-79-5	No
Trimethylbenzene	25551-13-7	No
Acenaphthene	83-32-9	No
Acenaphthylene	208-96-8	No
Anthracene	120-12-7	No
Benzo[e]pyrene	192-97-2	No
Fluorene	86-73-7	No
2-Methyl naphthalene	91-57-6	No
Perylene	198-55-0	No
Phenanthrene	85-01-8	No
Pyrene	129-00-0	No
Aluminum Oxide	1344-28-1	No
Barium and Compounds	7440-39-3	No
Molybdenum trioxide	1313-27-5	No
Phosphorus	504	No
Silver and Compounds	7440-22-4	No
Thallium and Compounds	7440-28-0	No
Zinc and Compounds	7440-66-6	No
1-Methylphenanthrene	832-69-9	No
4,6-Dinitro-o-cresol (and salts)	534-52-1	No
Butyl benzyl phthalate	85-68-7	No
Phthalates	518	No
4-nitrophenol	100-02-7	No
2-Chlorophenol	95-57-8	No
2,4-Dinitrophenol	51-28-5	No
Trichlorofluoromethane (Freon 11)	75-69-4	No

References

[1] See Oregon Administrative Rule 340-245-8010 Table 2.